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Linking Tourism, the Environment, and Sustainability

Topical volume of compiled papers from a special
session of the annual meeting of the National
Recreation and Park Association, 1994

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Preface

Tourism is an industry of global significance. It is one of the World's largest industries and has become more attractive as a relatively quick generator of foreign exchange or income to local areas. While tourism development is a major agenda item for many Third World countries, only recently has it achieved the same degree of attention in the United States. The issues of sustainability, integration with ecosystem

management, and impacts on local quality of life must receive attention by the tourism industry, by governments, and by the general populace.

This volume is a compilation of papers designed to provide insight into issues, concepts, and applications important for developing sustainable tourism policies. While the focus is on the United States, examples from other countries are included. These other countries face similar issues but differing social and political contexts.

The papers included here were first presented at the National Recreation and Park Association Leisure Research Symposium, held October 12-14, 1994, in Minneapolis, MN, at a special session entitled "Linking Tourism, the Environment, and Concepts of Sustainability." The compilers thank the participants for preparing the papers and posters for this book. We thank the four referees who each reviewed about 15 manuscripts: Bill Gartner, University of Minnesota; Pat Long, University of Colorado; Steve Siebert, University of Montana; and Jeff Sieger, Black Hills State College. We also thank the Research Information staff of the Forest Service Intermountain Research Station for their acknowledgment of the significance of this topic through their decision to publish this volume. We thank Karen Eason of that staff for her editing work on the book.

This volume is organized in three parts. First, we present basic concepts and principles on sustainability and tourism. These papers help us understand the complexity of the issue. The second part deals with the market for sustainable tourism. Authors look at the tourism market and how it may be segmented. The third section deals with impacts and quality of life issues. This section is particularly relevant for those viewing sustainable tourism as an economic development tool.

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Page

Concepts of Sustainability		1
Stephen F. McCool	Linking tourism, the environment, and concepts of sustainability: setting the stage	3
Steven W. Burr	Sustainable tourism development and use: follies, foibles, and practical approaches	8
Ruth V. Russell Karen M. Hilton	Sustaining tourism growth: a developing country case study	14
Jill Knowles-Lankford Samuel V. Lankford	Sustainable practices: implications for tourism and recreation development	18
Understanding the Market for Sustainable Tourism		23
Paul F. J. Eagles	Understanding the market for sustainable tourism	25
Kenneth E. Silverberg Sheila J. Backman Kenneth F. Backman	Understanding nature-based tourists: using psychographics	34
Roger McCawley Joseph D. Teaff	Characteristics and environmental attitudes of coral reef divers in the Florida Keys	40
Rodney B. Warnick	United States travel abroad, 1979 to 1991: generational trends impacting the sustainability of the United States travel market	47
Jaclyn A. Card Marit Johnson Vogelsong	Ecotourism as a mechanism for economic enhancement in developing countries	57
Tourism and Quality of Life		61
Neal A. Christensen	Sustainable community-based tourism and host quality of life	63
Steven R. Martin	Montanans' attitudes and behavioral intentions toward tourism: implications for sustainability	69
Kathleen L. Andereck	Environmental consequences of tourism: a review of recent research	77
Steven W. Burr	Rural action class perceptions of tourism and its potential for economic development: case studies from four rural Pennsylvania counties	82
Samuel V. Lankford Jill Knowles-Lankford	Impacts of tourism development in the Penghu National Scenic Area, Republic of China	90

Concepts of Sustainability

Understanding the Market for Sustainable Tourism

Tourism and Quality of Life



Concepts of Sustainability



Linking Tourism, the Environment, and Concepts of Sustainability: Setting the Stage

Stephen F. McCool

Abstract—The tourism and recreation industry is at a crossroads in its development. Now one of the world's largest industries, it is increasingly confronted with arguments about its sustainability and compatibility with environmental protection and community development. Consideration of tourism, the environment, and concepts of sustainability should consider four key challenges: (1) a better understanding of how tourists value and use natural environments; (2) enhancement of the communities dependent on tourism as an industry; (3) identification of the social and environmental impact of tourism; and (4) implementation of systems to manage these impacts.

The Challenge

The tourism and recreation industry is confronted with serious and difficult choices about its future. The decisions made now will for decades affect the lifestyles and economic opportunity of residents in tourism destination areas. Many of these decisions are irreversible because once communities lose the character that makes them distinctive and attractive to nonresidents, they have lost their ability to vie for tourist-based income in an increasingly global and competitive marketplace.

One option is to continue the road of the past, focusing on delivering the service and retail sectors that have provided the bulk of economic benefit to local communities—lodging, transportation, food and retail sales—without considering the emerging concerns about the industry. This option is based on assumptions about stability in values and preferences of travelers, and it delays answers to vital questions about the tourism product, appropriate scale and type of development, sustainability, and hosts' quality of life. These assumptions are questionable in an era of rapid social change where the future is no longer a straight-line projection of the past.

Worldwide, tourism is undergoing fundamental change, from the experiences and settings travelers demand to the regulations governments impose to protect the environment. Signs of these shifts are everywhere, from tourism industry statements on the value of the environment

(Cook and others 1992) to the demand for "ecotourism." This transformation of demand and values leaves the industry no alternative other than to pursue a different, yet difficult, course—one that builds upon the key questions of purpose, objectives, values, and strategies.

Decisions about tourism development are difficult. The fundamental questions they imply—such as the visions we have for our communities, how changes brought about by development will impact these visions, and how the community can absorb such changes—have largely been ignored in the past. These decisions are controversial because they will prevent or diminish some traditional uses of natural resources and affect the people who have or who might have benefited from those uses. Powerful economic forces entrenched in the current direction are reluctant to open dialogue. The decisions are essentially judgments reflecting divergent value systems and how those value systems will be integrated.

Our clients, primarily the public, are communicating through changes in tastes and preferences and, consequently, they are demanding that the industry pursue sustainability and care of the environment. We need to systematically explore the linkage that exists, whether recognized or not, between tourism, the environment, and sustainability. To begin that exploration, I will briefly review the significance of sustainability and the environment and the questions that implies for tourism researchers.

Concepts of Sustainability

As we humans become more aware of our impact on the Earth and its life support systems, we increasingly look for examples of economic and community development other than unconstrained growth. Some have argued that gross national product or per capita income are incomplete measures of well-being. These measures may not accurately portray the distribution of economic benefits among people, they do not faithfully capture important quality of life factors, and they do not measure the temporal or social distribution of existing and anticipated costs and benefits of resource development programs.

Many argue for the development of "sustainable" economies as the new guidepost to deal with issues of growth, economic and community development, and environmental protection. Sustainable growth and natural resource development will help communities use natural resources more prudently and sensitively than in the past and ensure their continued survival.

Sustainability contains the appeal of an attractive model for action but is difficult to implement practically or operationally. Sustainability is often associated with such

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terms as “sustainable development,” “sustainable management,” “sustainable agriculture,” “sustainable forestry,” and “sustainable tourism.” In the tourism and recreation context, it is frequently associated with discussions of “ecotourism” and “nature-based tourism” (Boo 1990; Whelan 1991).

Sustainability has become an attractive ideal for both scientists and activists, but operational details, objectives, or actions provided by advocates are scarce. Dixon and Fallon (1989) conclude that the sustainability debate involves “how to pursue the goal and how to measure progress toward it.” Sustainability, as Dixon and Fallon note, was originally a biophysical concept that is now being applied in a social and policy context, contributing to confusion about what is to be sustained and for whom. For example, by sustainability do we mean sustaining physical outputs, such as board feet of timber or room occupancy, or do we mean the ecological patterns and processes that maintain naturally occurring ecosystems? Or by sustainability are we concerned with the ongoing social, political, and cultural processes that give communities character and individuals security?

Gale and Cordray (1991) defined eight approaches to the concept of forest sustainability, then in 1994 expanded this to nine (table 1). Gale and Cordray portray the discussion about sustainability as answers to four defining questions: What is to be sustained? Why sustain it? How is sustainability measured? And what are the politics? One of their approaches emphasizes the economic sustainability of natural resource-dependent social systems. This is a narrow approach, however, and does not address other relationships communities have with natural resources that make them dependent on these resources, such as access to forests for recreational, educational, and spiritual purposes. A related approach, also defined by Gale and Cordray, is the sustainability of human benefits that flow from natural resources. Again, this approach is narrowly focused on specific product benefits.

Often, discussions of sustainability are presented within the context of stability, particularly about communities (defined in a territorial versus an interest sense). We generally want our communities to be stable and predictable and to provide a sense of belonging. Sustainability goes beyond economic considerations and biophysical issues; it must deal with important concepts of social order, such as hierarchy, territory, and norms (Burch and DeLuca 1984). We must understand how tourism development may impact the distribution of wealth or power, may affect land uses and zoning laws, and may interject new behaviors or institutions. We must discuss the acceptability of tourism-based interventions in the normative social order: What do these changes mean for community stability? And we must consider factors affecting a community’s capacity to deal with such interventions. In other words, how do the type and intensity of tourism-induced disturbances affect our social world?

Sustainability definitions also frequently speak to intra- and intergenerational equity and option maintenance. The tourism industry receives substantive criticism about the distribution of jobs and income (Barrett 1987; Smith 1989). While job quality encompasses more than wages and monetary benefits, inequities in income are a major concern that residents hold about tourism development (Martin and McCool 1992). Nearly 58 percent of the adult Montanans participating in the Martin and McCool (1992) study agreed that tourism industry jobs are low paying, and over 55 percent disagreed that their household standard of living was higher because of tourist expenditures. What is an equitable distribution of options and income?

Sustainable tourism allows visitors to enjoy an attraction, community or region with a volume and impact in such a way that the local culture and environment are unimpaired (Hill 1992). Strictly speaking, tourism and recreation use always lead to some level of impairment in natural systems. The question is primarily how much change is

Table 1—Some alternative definitions of sustainability (adapted from Gale and Cordray 1994).

Sustainability term	What is sustained
Dominant product sustainability	High valued natural resource-based products
Dependent social systems sustainability	Social systems (families, occupations, communities)
Human benefit sustainability	Diverse human benefits (both economic and noneconomic)
Global niche sustainability	Globally unique ecological systems (reefs and such)
Global product sustainability	Commodities valued globally produced only in a few local areas
Ecosystem identity sustainability	General types of ecosystems (forests, wetlands)
Self sufficiency sustainability	Integrity of biological systems; their operation without human intervention
Ecosystem insurance sustainability	Diversity of ecosystems within a planning area
Ecosystem benefit sustainability	Ecosystem process permitted to operate in undisturbed and pristine manner

acceptable. Hunt (1993) argued that the tourism industry should care both for visitors and for the places they visit: "the communities in which we live." Clearly, researchers view sustainability as more than physical commodities from natural ecosystems.

Despite the extensive discussion about sustainability since the 1987 report from the World Commission on Environment and Development, which popularized the issue, few answers have been found. Entering sustainability-based management is essentially a value judgment, a decision that says that current management is inadequate or inappropriate. Sustainability is a concept decisionmakers can use to assess the consequences of actions on human communities. A human focus is deliberately taken here because it is the human population that places values on social structure, cultural values and traditions, economic opportunity, and ecosystems and their species. Maintenance of ecosystems and the protection of individual species are human-based values and, therefore, can be described from only a human viewpoint.

Human communities are impacted in a variety of ways by tourism, including social structure and function, cohesiveness, economic and educational opportunity, community stability, provision of and payment for services (police protection, fire), physically (architecture, location and design of highways), competition in access to recreation opportunities and other services, and interaction with the natural environment and the noncommodity values it produces. The general concept is that sustainability is not only a goal for specific industries, but it is also an objective for the human communities that benefit and that are impacted from various economic development scenarios. Industry sustainability goals are most likely physical output or net revenue goals, such as board feet of timber, room-nights occupancy, and skier visits. These sustainability goals, however, may not achieve broader community sustainability goals, goals that may be difficult to quantify and measure.

Several other questions must be dealt with. At what spatial or social organizational scale do we want to measure sustainability—globally, regionally, locally? We also are concerned about the temporal scale of sustainability—tomorrow, next week, next year, and the next generation. We need to examine not only industry-specific sustainability, generally addressed by physical commodities, but also the impacts of distinctive economic development actions on the larger community.

Returning to Gale and Cordray's four defining questions, can we determine what should be sustained, for what reason, and how? Would our clients have similar answers to these defining questions about sustainability? What processes would we use to address these questions and resolve differences? These questions would certainly confront the tourism researcher. While discussions of sustainability may not result in on-the-ground applications, the discussions do force debate about scale (both temporal and spatial), fundamental purposes, and appropriate means. The result is that sustainability discussions require biologists and sociologists.

Tourism and the Environment

Cook and others (1992) state that "environment is the travel industry's base product." While many tourism promotion efforts banner the climate, sun, warmth, and sand of particular destinations, tourism's dependency on environments, in particular, nature-dominated environments, does not appear to be well understood within the tourism and recreation industry. That dependence is rarely discussed in the literature. Cook and others, for example, focus more on how the tourism industry is meeting legal obligations for environmental protection (such as emissions) than the dependency of tourism on high-quality natural environments.

The importance of the environment in attracting vacation travel is significant, and as Williams (1992) states, "natural beauty and cultural heritage represent a competitive advantage" for many areas. In a recent poll (Angus Reid Group 1993), 65 percent of California travelers stated that "a place that takes care of its environment" is very important in choosing a destination outside of the state. "A chance to see wildlife and undisturbed nature" was rated as very important by 44 percent of the respondents. While there is a question about the congruence of attitudes and behavior, such relatively high ratings of environmental attributes signal the increasingly important role of ecosystem amenities in tourism development. In their study of visitors to Montana during the fall, Menning and McCool (1993) report that potential visitors who hold both an environmental motivation and an image of a destination as "natural" were more likely to visit the area than were other respondents.

The linkage between environment as an attraction and economic impact can be substantial. Yuan and Moisey (1992) estimated that about half of the economic impact from Montana's tourism industry can be attributed to recreation activities occurring in wildland settings. Obviously, impacting these settings negatively could significantly affect the jobs and employment of thousands of people.

Our examination of linkages should consider four key questions. First, we need to better understand how tourists value and use natural environments. We know that outdoor recreation activities (pursuits that are heavily dependent on natural environments) are important components of many states' tourism industries. For example, in Idaho, about 42 percent of the nonresident visitors participate in these activities. Among vacationers in Montana, scenery is the most important reason for visiting the state and is the most frequent source of visitor satisfaction. Research not only can help us better understand the motivations of visitors attracted to natural environments (Eagles 1992) but can also identify attributes important to visitors, how to maintain those attributes, and how visitors interact with them. Science can also play an important role in identifying the benefits visitors derive from interactions with the environment and how those perceived benefits can be measured. Through research we may find specific linkages between benefits sought, recreation behavior, and money expenditures.

Second, research can help tourism development agencies use this information to enhance the livability of communities that are dependent on this industry. All too often, we have viewed tourism agencies as concerned with promotion, but not concerned with the fundamental rationale for their marketing efforts. I submit that the reasons we are interested in tourism are to provide communities with the necessary resources to enhance their livability, to protect their natural and cultural heritage, and to provide economic opportunity for their citizens. Tourism agencies narrowly view their mission as one of promotion and have neither considered the effects of promotion nor placed their efforts within a larger context of community development. Understanding alternative theories of economic development—in this case sustainability—may help put promotion within a context that helps communities identify their goals and the role of tourism in achieving them.

Third, researchers play an important role in identifying the social and environmental impact of tourism. Rigorous discussions of impacts on the environment as well as useful conceptual models of impact processes are sadly lacking in the tourism literature. While a body of literature has been developed to deal with impacts at the micro scale (see Cole 1987 for an example), few tourism researchers have concerned themselves with identifying impacts on the natural environment. Because the environment is the product, we need to understand how people may negatively affect the very values they seek.

Fourth, we need systems to manage both the environmental and social impacts to tourism. This concern has been popularized in the phrase "tourism destroys tourism," although a paraphrase could be applied to many resource extractive industries and, therefore, the concern is not a differentiating characteristic of this industry. In marketing terminology, we need more knowledge of product quality management. Any amount of tourism use results in some impact. So the questions that most tourism communities and environmental managers are confronted with deal with acceptability and manageability of tourism impacts. While some (for example Getz 1983) advocate a carrying-capacity approach, such approaches may be too simplistic for the complexity and range of issues presented by tourism development. Williams and Gill (1991) conclude:

Despite the rhetoric concerning tourism use 'limits,' 'ceilings,' 'thresholds,' difficulties with traditional numerical carrying capacity indicators exist. As for recreation, little evidence exists to suggest that by simply lowering or raising a specific carrying capacity standard, predictable changes in an area's ability to handle tourist use will occur. Instead, the key appears to lie in how change associated with tourism is managed.

An adequate framework would (1) recognize that the interface between tourism and the environment involves primarily social questions as opposed to biotechnical ones, (2) avoid the excessively reductionistic and limited perspective provided by a carrying-capacity-based approach, and (3) include the wide range of stakeholders affected by tourism development choices in the planning and management processes (McCool and Stankey 1993). One such framework was proposed by Williams and Gill (1991) in their monograph on growth management. The limits of acceptable change process (McCool 1994; Stankey and others 1985) is another.

Conclusions

Sustainability and the linkages to both social and natural environments that the concept implies provide new challenges for tourism researchers. Our research must now be more holistic, more encompassing, and more sensitive to the needs for relevant policy.

The science of tourism can play an important role in discovering implications for the choices facing the industry. If not pointing the way, it can inform the industry of the consequences of alternative paths to economic development, resource protection, and enhancement of our quality of life. It can illuminate both the costs and benefits of alternative economic development scenarios and provide challenges to the conventional wisdom of tourism development.

We must begin to think in terms of appropriate frameworks of tourist-environment-community interactions, how these can be modeled, how hypotheses can be tested, and how results can be implemented. We need to define the role of the researcher in tourism and community development issues. How the industry and the research community respond to value changes will have much to say about the industry's continued viability.

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Sustainable Tourism Development and Use: Follies, Foibles, and Practical Approaches

Steven W. Burr

Abstract—This paper examines sustainable development and use, reviews criticisms and problems with sustainable approaches, and relates these to parallel concepts, approaches, criticisms, and problems in sustainable tourism development and use. This examination should increase understanding of more realistic and practical approaches to sustainable tourism development and use for rural communities with resource amenities. To facilitate such sustainable approaches, the focus must be on small-scale, environmentally sensitive development. Success is dependent upon local groups and communities becoming empowered to organize and influence development decisions.

With the 1987 findings and recommendations of the World Commission on Environment and Development in a report entitled "Our Common Future" (WCED 1987), "sustainable development" became a buzzword within the international development community. Although certainly controversial, the WCED report has been enthusiastically received by the international community, and attempts are being made worldwide to investigate, initiate, and achieve sustainable approaches to tourism development. The term "sustainable development" refers to all development paths that are either environmentally benign or beneficial. This concept is often tied to sustainable use, referring to the notion that careful and sensitive economic development is possible without degrading or depleting natural resources needed by present and future generations. Sustainable use has become a central organizing principle for global environmental policy. As recently as June 1992, during the Earth Summit in Rio de Janeiro, governments attempted to forge an action agenda based on sustainable development and use (Linden 1993).

One recommendation of the World Commission is that industries should be encouraged to be more efficient in resource use, to generate less pollution and waste, and to minimize irreversible adverse impacts on human health and the environment, and should be based on use of renewable resources. Tourism is often presented as an ideal, nonpolluting and environmentally friendly, labor-intensive industry. The travel and tourism industry relies on natural, historical, cultural, and human resources in the local environment as tourist attractions and destinations. This industry may be viewed as one different from the

"hard" resource extractive industries. In many rural areas worldwide, new development initiatives place more emphasis on the development of tourism as a viable economic base, especially where the natural resources, on which the traditional extractive industries have been dependent, are depleted. Tourism as a development industry can create recreational uses for the natural and artificial amenity resources of a rural community and convert these into income-producing assets (Siehl 1990; Willits 1992).

The impact of the travel and tourism industry on the international economy is enormous. According to the World Travel & Tourism Council (1992), this is the world's largest industry. In 1993, tourism was predicted to account for some \$3.5 trillion of the gross domestic product (6 percent of the world total), 127 million jobs (1 in every 15 workers worldwide), 7 percent of global capital investment, and 13 percent of worldwide consumer spending.

Many rural communities have become (willingly or unwillingly) "host" communities to an ever-growing influx of tourists attracted to their resource amenities. Critical challenges in tourism development are to make such development and the accompanying use sustainable to prevent degradation of environmental resources and exploitation of local human and cultural resources, and to ensure that such resources are maintained for the future (Inskeep 1991). Tourism could even help promote and protect biological diversity.

Despite the acceptance of sustainable tourism as a desirable form of development and use, a gap commonly exists between policy endorsement and policy implementation (Pigram 1990). Scientists are beginning to acknowledge that theories of sustainable resource development and use almost never work in practice (Linden 1993). With natural resources, conservation and development are not the same process. Development and its associated growth almost always bring a loss of biological diversity. In especially sensitive ecosystems, instead of focusing on sustainable development, policymakers will need to focus on preservation and try to guide development away from these sensitive ecosystems and toward regions where inevitable losses of diversity are more "acceptable." With tourism, shortcomings in implementation arise because of conflicts among special interest groups with their own perspectives on tourism development, difficulties with planning and local control in rural areas and developing countries, and the tendency of capital expansion to create both development and dependency. Achieving a nontraditional policy of sustainable tourism development is not easy now, nor will it be in the future (Pigram 1990), and we may even question whether it is attainable at all.

This paper examines sustainable development and use, reviews criticisms and problems with sustainable approaches, and relates these to parallel concepts, approaches, criticisms, and problems in sustainable tourism

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development and use. This examination should increase understanding of more realistic and practical approaches to sustainable tourism development and use for rural communities with resource amenities.

Sustainable Development and Use

In 1987, the World Commission on Environment and Development called for a new era of economic growth—growth that is forceful and at the same time socially and environmentally sustainable. This growth must be based on policies that sustain and expand the environmental resource base. From the Commission's perspective, humanity has the ability to make development sustainable, ensuring that it meets the needs of the present without compromising the ability of future generations to meet their own needs. In accomplishing this goal, sustainable development should promote intergenerational responsibility. The concept of sustainable development does imply limits, not absolute limits, but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. Technology and social organization can be both managed and improved to make way for a new era of economic growth, but...

Meeting essential needs requires not only a new era of economic growth for nations in which the majority are poor, but an assurance that those poor get their fair share of the resources required to sustain that growth. Such equity would be aided by political systems that secure effective citizen participation in decision making and by greater democracy in international decision making. (WCED 1987, p. 8)

The emphasis here is on local control of resources and connected enterprises at the local community, regional, and national levels. This approach to sustainable development contains two key concepts: (1) the concept of "needs," in particular the essential needs of the world's poor, to which overriding priority should be given, and (2) the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs (WCED 1987, p. 43). Sustainable development must rest on the political will in both developing and developed nations, and it implies a concern for social equity both between generations and within each generation. Critical objectives for environmental and developmental policies that follow sustainable development include reviving growth, changing the quality of growth, meeting essential needs of jobs, food, energy, water, and sanitation, ensuring a sustainable level of population, conserving and enhancing the resource base, reorienting technology and managing risk, and merging environment and economics in decisionmaking. Changing the quality of growth requires changing our approach to development efforts to take into account all of their effects. Development policies must widen peoples' options for earning a sustainable livelihood.

Criticisms

Although the Commission's report received worldwide support, it is not without its critics. Redclift (1987) and

Davis (1991) both state that while many of the Commission's proposals are practical, most will be difficult to implement, at least in the near future. Redclift (1987) maintains that sustainable development can only be achieved through political changes at the local, national, and international levels. Redclift argues that environmental management must make use of social movements dedicated to environmental ends and must also use the knowledge and experience that people possess about their environments. Davis (1991) maintains there is consensus that the term "sustainable development" presents the international community with a new and radical way of discussing modern development goals.

However, disagreement on the issue of sustainable development centers mostly around the issue of "right implementation." How can endorsement of sustainable development rightly become policy implementation? Pitfalls occur not only at the grassroots level, but also exist at the institutional and organizational levels. For example, when negotiating with powerful transnational companies, developing countries are often weak at addressing local, regional, and national environmental concerns.

Chambers (1986) considers the rhetoric of sustainable development to be a discourse that ignores the primary and more immediate needs of the poor. Illich (1989) views the concept of sustainable development as an oxymoron because "sustainable" is the language of balance and limits and "development" is the language of more. For Illich, the answer is not sustainability, but subsistence, which is simply living within the limits of basic human needs. Others argue that sustainable development will ultimately have detrimental effects on the "subsistence" economies of the Third World (Shiva 1989; Sachs 1989). Such critics view the Commission's report as a "top-down" document that wrongly uses Western standards to measure economic development, growth, and poverty. Instead, they call for the more active reconstruction of indigenous wisdom and for the preservation of traditional forms of social organization.

Alternative Approaches

Court (1990) argues that the goals of sustainable development should be recast in a more discerning theoretical framework and offers six principles that could help determine which development projects will truly promote environmental, economic, and cultural sustainability. According to Court, development must: (1) grow from within and not be forced from the outside; (2) be compatible with and restore environmental, economic, and cultural diversity, and rely on sustainable forms of resource use; (3) provide the basic necessities of life and secure quality living conditions for all people, promote equity, and avoid unequal exchange; (4) foster self-reliance, local control over resources, empowerment and participation by the underprivileged and marginalized, and provide opportunities for action that people can feel is fulfilling; (5) be peaceful, both in the direct sense (the nonuse of physical violence) and in the structural sense (violence as embodied in the institutions of society); and (6) allow for mistakes without endangering the integrity of the immediate ecosystem and resource base (p. 135-136).

Milbrath (1989) maintains that the basic and ultimate value for any society is life in a viable and flourishing ecosystem. The second priority is the maintenance of a viable and flourishing social system that upholds the core values of security, compassion, and justice. "Only as these priorities are maintained is it possible for a society to encourage individuals to pursue quality of life as they see fit" (p. 151). A viable and flourishing society is based on a viable and flourishing economic system, which in turn is based on viable and flourishing ecosystems.

Milbrath maintains that an economic system must serve a variety of values: (1) preserve and enhance a well-functioning ecosystem; (2) provide humans with goods and services—necessities for a good life; (3) provide opportunities for fulfilling work and self-realization; (4) achieve and maintain economic justice; and (5) utilize resources at a sustainable rate in order to ensure justice for future generations (p. 81-82). Milbrath believes that inherent weaknesses of economic markets make it impossible for us to depend on them to allocate resources so that society can become sustainable. It is up to government to play a critical role in achieving sustainability. "Neither equality nor freedom can be fully realized in a good society. It is unwise to make either a dominant value in an ideology" (p. 150).

Similarly, Barbier (1987) identified three systems as basic to development: the biological or ecological resource system, the economic system, and the social system. To each of these systems human society applies goals, each with its own hierarchy of subgoals. For example, biological system goals might include genetic diversity, resilience, and biological productivity. Economic system goals might focus on increasing the production of goods and services, satisfying basic needs or reducing poverty, and improving equity. Social system goals might involve cultural diversity, social justice, gender equality, and participation. Barbier believes the objective of sustainable development is to maximize goal achievement across these three systems at the same time through tradeoffs.

The reality is that it is not possible to maximize all goals at the same time, and there may be conflict between and among inter- and intra-system goals. Choices must be made as to which goals are more valuable and which should receive higher priority.

Tradeoffs among goals must be adaptive because individual preferences, social norms, and ecological conditions, change over time (Barbier 1987). In addition, goals change as the scale of the systems is extended from local to regional to national and even to global levels. Consequently, sustainable development goals pursued at a national level may be different from those advocated at a local level.

Holmberg and Sandbrook (1992) point out that the concept of sustainable development at a national and local level provokes groups to set a wide spectrum of goals and then to reconcile them. It is this "reconciliation or tradeoffs implicit in sustainable development that has inspired much useful work since the early 1980's...[amounting] to a new renaissance in thinking on social welfare and development issues" (p. 25).

However, Holmberg and Sandbrook also point out four dilemmas or disagreements for which no resolutions have

been found (p. 27-30). First, the world cannot go on making economic growth, as conventionally perceived and measured, the unquestioned objective of development policy. Second, the factors that make up sustainable development differ from those involved in conventional economic development. Consequently, there is a need for a completely new set of qualitative growth indicators and a set of methodologies for obtaining them. Third, how do we answer the questions for whom is development done, and what is to be conserved by making it sustainable? Is development primarily for people, or is conservation of the environment the top priority? Both viewpoints advocate sustainable development and both will say that the environment will need to be preserved for future generations, but they may differ strongly on the means for bringing this about. The fourth dilemma involves the relationship between sustainable development and democratic government. Modern democratic governments work hard to convince voters that their priorities provide the most benefits for the most people, but this inevitably means consuming resources that then would not be available for future generations. Similarly, politicians do not win elections by promising voters a better deal for citizens of other countries, even if this improves the overall chances of a sustainable world order.

All of this leads to the conclusion that there is no short cut. ...[That] it is necessary to build patterns of sustainable development from the bottom up, showing by example what can be achieved at local levels and then working to disseminate positive experiences. When local progress is constrained by factors beyond the control of the community concerned, public pressure will grow to amend the national and, eventually, also the international context. (Holmberg and Sandbrook 1992, p. 31)

Holmberg and Sandbrook (1992) use the term "primary environmental care" to describe the process for progress toward sustainability at the "grass roots." Primary environmental care groups develop approaches that work at the community or neighborhood level in the interactive zone between economic, environmental, and social systems, and includes processes by which "local groups or communities...organize themselves with varying degrees of outside support to apply their skills and knowledge for the care of their natural resources and environment while satisfying livelihood needs" (p. 31-32).

Primary environmental care has three integral elements: the economic goal of meeting and satisfying basic needs, the environmental goal of protection and optimal utilization of the environment, and the social goal of empowering groups and communities. According to Holmberg and Sandbrook (1992), the three goals should be considered together. The success of primary environmental care is dependent upon local groups and communities that are permitted to organize, participate, and influence development priorities, to access natural and financial resources, and to select and help develop productive and environmentally sensitive technologies. Additionally, outside institutions must empower the local community by way of political support and open access to information and take an adaptive approach if they provide resources.

Primary environmental care by definition does not address what needs to be done when communities interact. People can help to bring about sustainable development only if the local, regional and national government policy framework is propitious to that end.

But the reverse is equally true: sustainable development will not come about without active involvement of the people concerned. ...Empowerment of people to taking increasing charge of their own development is the key ingredient, combined with a clear knowledge of environmental constraints and of requirements to meet basic needs. (Holmberg and Sandbrook 1992, p. 32)

Implications for Tourism

As previously pointed out, it is necessary to consider the tourism industry as a critical sector of our countries' economies because its growth and development can contribute to economic and social welfare. It is also important to emphasize the concept of equity that recognizes the contributions that people, communities, customs, and lifestyles make to the tourism experience (Cronin 1990). This implies that people must share in both the benefits and costs, now and in the future. The interest in sustainable tourism development and use is in protecting, using carefully, and benefiting the human or cultural, as well as the natural heritage of an area. It follows that sustainable tourism development and use contains within it a strong commitment of participation by local people and government and a strong commitment to leadership on their part. This strong ethical component—a commitment to be guided by the wishes of the people and their governments in the host area—is fundamental to true sustainable tourism development and use (Cronin 1990).

Tourism development has an important role in environmental protection and in economic and social development. But it must be carried out in such a way as to be compatible with the principles of sustainable development. Specifically, according to Cronin (1990), this means that sustainable tourism development must follow ethical principles that respect the culture and environment of the host area, the economy and traditional way of life, the indigenous behavior, and the leadership and political patterns. It must be assessed on an ongoing basis to evaluate impacts and to permit action to counter negative effects. Other issues involve balance and planning. "Sustainable tourism development consists of finding the balance between a degree or type of development that will bring economic and other benefits to a community and the point at which that development starts to feed on rather than sustain the very elements at its basis" (Cronin 1990, p. 15). Thus, any of the approaches to sustainable tourism development and use—such as alternative tourism, adventure travel, ecotourism, and socially responsible travel—must fundamentally focus on equity and balance and integrative planning.

Cronin (1990) advocates a rather ambitious 10-step plan to realize sustainable tourism development in individual countries, regions, and communities. With the designation of a coordinating individual and agency, subsequent actions would focus on the development of an information and awareness program, the development and use of integrated planning models to deal properly with new tourism projects, and the design of new tourism products or programs that are environmentally sensitive.

Another action would involve the assessment of existing tourism development to identify problems and solutions. Cronin additionally calls for a broadening and strengthening

of the information base for decisionmaking, developing a code of ethics by the tourism industry, developing and disseminating of guidelines among the memberships of international organizations, developing an educational program for tourism, and creating a tourism program within each nation aimed at international cooperation.

Although Cronin (1990) is quite optimistic with the implementation of sustainable tourism development, Macbeth (1994) is much more pessimistic. Macbeth employs economic, environmental, and social systems to examine the creation of sustainable tourism. He splits the social system into social and cultural and thus has a four-part model of ecological, economic, social, and cultural sustainability that provides a holistic approach to the question of sustainable rural tourism. "The four parts of sustainability suggest to us a complex process whereby the impacts of any venture must not only be documented, but also must be negotiated to satisfy the long-term aims of sustainability" (p. 42). Ideally, sustainable development and sustainable tourism must promote these four factors of sustainability equally and include the maintenance of capital reserves and intergenerational equity. Sustainability is lost if one dimension dominates; a focus on one inevitably leads to degradation in the others (p. 45). Macbeth asserts that as long as the simplistic view of economic growth in the short term is the prevailing ideology, then sustainability is unlikely to be taken seriously. "Tourism as we know it may not be sustainable in any case, because the environment will be battling to service population growth and demands for increasing standards of living worldwide" (p. 43).

These four parts of sustainability reinforce the fact that the narrow interests of any one group involved in tourism development will not contribute to sustainable development. Sustainable tourism development exists within the context of capitalist relations of production and, therefore, is only contributing to the expansion of capital and exploitation of human beings and nature. Macbeth (1994) states, "A call for sustainable tourism is more than anything else reactionary rather than progressive. The history of capitalism is full of examples of how reactionary tendencies are easily co-opted by capitalism to sustain its own existence, thus extending the status quo of exploitive relations rather than overthrowing them" (p. 44). The problem here is the so-called enlightened self-interest on the part of capital, especially big capital because it is mobile and highly exploitive. Until the "ruling capitalistic hegemony that is antithetical to sustainability" (p. 44) can be overcome, there appears to be not much hope of achieving a policy of sustainable development.

Feasible Approaches to Sustainable Tourism Development

To develop more realistic and practical approaches to sustainable tourism development and use for rural communities with resource amenities, the focus must be small scale. As Holmberg and Sandbrook (1992) point out, it is necessary to build and develop patterns of sustainable development from the bottom up, demonstrating by example

what can be accomplished at the local community level, and then disseminating those positive experiences to regional, national, and international levels.

At the local community level, the success of primary environmental care depends on local groups and communities being able to organize, participate, and influence development priorities, to access natural and financial resources, and to select and help develop productive and environmentally sensitive technologies. The development not only has to create jobs and generate income for rural residents but also must be environmentally sensitive. "Empowerment of people to taking increasing charge of their own development is the key ingredient, combined with a clear knowledge of environmental constraints and of requirements to meet basic needs" (Holmberg and Sandbrook 1992, p. 32).

Citizens must set goals and priorities for local economic development. Rural tourism development can play a major or at least a complementary role in this process. This would be dependent on citizen interest and support, and the availability of resource amenities appropriate and attractive for potential tourism development.

This approach is reinforced by Singletary (1993) who presents results from recent research of a random sample of 2,400 rural Pennsylvania residents, representing their attitudes toward local economic development. Despite the conflict between desirable economic development and resistance to change in the rural environment, the majority of respondents surveyed approved of economic growth if it creates jobs for local residents. However, these citizens prefer to see small-scale, locally owned development. They also desired development sensitive to land, water, and wildlife resources, and most of the respondents agreed that good planning is necessary.

Singletary (1993) points out the need for citizens to create a range of alternatives. This requires leadership development by educating citizens about global economic forces underlying structural change, helping them collect and analyze information about their local economies and environment, and helping them to improve their abilities to communicate ideas and process group issues to facilitate desirable development outcomes. The planning process may foster the alliances with neighboring communities, reaching across municipal boundaries.

Much of this process may require the expertise and knowledge of professionals. This may be true especially for any tourism-related planning and development supported by interested citizens. In this scenario, however, what sustainable development involves is secondary to whom it involves. Sustainable development will not happen unless empowered rural citizens and communities working together make it happen.

Rural communities' local actions and interactions help ensure the protection and preservation of environmental and community amenities that are the foundation of tourism (McCool 1987). Local action offers opportunities for interaction among community members, one of the necessary elements for the emergence of community (Wilkinson 1992). Local leadership is of key importance. Community interactions start with a specific local action initiated by a few key community leaders, which in turn lead to further community development. Often governmental officials

and organizational leaders provide support and legitimation to these highly involved leaders. Common interests and overlapping group memberships among these leaders provide a basis for cooperation and are an indication of a functioning community network. Even with strong local leadership and community interest and support, it is often necessary to obtain the expertise of specialists or to secure outside funding to realize most large-scale projects.

Rural communities need to utilize all strategies available to them to increase awareness about tourism and to initiate effective actions to deal with tourism development. In the process, rural tourism development, as a special interest field of community action, can encourage, cultivate, and contribute to sustainable rural community development (Burr and Walsh 1994).

Where community meets the needs of a local society and its people, where these people have an attachment to community as a place, and where locality-oriented interactions result in the emergence of a viable community field, the probability of "assault" on the environment will be much lower, resulting in ecological well-being and sustainability. Ecological well-being is crucial for rural development. It ultimately brings both economic and social well-being, resulting in the sustainable development of the community.

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Sustaining Tourism Growth: A Developing Country Case Study

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Abstract—Observers of modern tourism divide into two views about its role in developing countries. One view is that tourism dehumanizes and destroys the cultural integrity and environmental richness of the area. The other view is that tourism is a boon because of the economic benefits it brings to the people and government. This case study on tourism in Malaysia illustrates both perspectives. Data gathered from a content analysis of newspaper articles demonstrated a simultaneous positive and negative impact of tourism in terms of culture, the economy, and the natural environment. Findings also highlight the use of tourism for positive world image portrayal and infrastructure development.

To travel—for economic or religious reasons—is as ancient as any human activity. Perhaps better labeled the pilgrimage, early tourism in Asia, for example, witnessed hoards of the devout deriving spiritual reward from a trip to a shrine. The farther the distance, the greater the sanctity.

In the 19th century, Americans and Europeans began to travel purely for rest, relaxation, or education as city dwellers sought the respite of the countryside. The socialization of Western elites began to include the “grand tour” of Europe. Distant places, and the people in them, were idealized as travel offered an antidote to industrial civilization’s discontent (Callimanopoulos 1982). But modern tourism is an entirely new phenomenon, dating only from the mid-1960’s, when industrial affluence, an expanding middle class, easily secured credit, and relatively cheap commercial jet travel combined to make possible what has today become an industry with an estimated 420 million travelers spending \$40 billion a year (Nelson and others 1992).

Observers of this new tourism tend to divide into two camps (for a more scholarly treatment see Graburn 1976; MacCannell 1976; Smith 1989). From the one camp is the view that the prize trophies caught in the tourist trap are the indigenous peoples and their lives that are the objects of the trip. According to this view, tourism ultimately dehumanizes and destroys the cultural integrity and environmental richness of an area (Fisher 1990). In Asia, tourism’s

alteration of the livelihood and social customs of the Sherpa culture of Nepal is often cited as an example of this perspective.

The opposite camp views tourism as a boon because of the economic benefits it brings to the people and government of an area. Not surprisingly, national governments are generally persuaded by this argument, with those of South Asian countries no exception. According to the World Tourism Organization, international tourist arrivals worldwide have increased 4.5 percent since 1992. While Europe and the Americas continue to lead in market shares of world regions, there has been a significant rate of growth for tourism to Hong Kong, Singapore, Thailand, Malaysia, Korea, and Indonesia (Cooper and Latham 1994)—thanks in large part to these governments’ targeting of tourism as an economic development tool.

The focus of 1 year’s fieldwork in the country of Malaysia was to differentiate tourism’s good and bad impacts. Data were collected from demographic and economic government documents; 102 interviews with tourism officials, Malaysian citizens, and international tourists; 38 tourist site inspections on Peninsular Malaysia (some multiple times), both through official sanctions and unobtrusively; 89 hours of participant observation data from three sites; and a content analysis of tourism newspaper articles. This paper discusses the results from the latter component of the fieldwork.

Malaysian Tourism

The pearl-gray light of predawn is just seeping into the sky above the Rantau Abang beach in Malaysia when the early-morning silence is shattered by the arrival of a convoy of cars and minibuses. More than 200 eager tourists pour out, stumbling at a half trot down from the road, through the deep sand toward the sea. The guide, a small man wearing jeans, running shoes and a jacket advertising Marlboro, is standing over the huge dark shape of a leatherback turtle. He waves the new arrivals over with his flashlight, a lighted cigarette dangling from his mouth.

So reports a newspaper article (*New Straits Times*, November 12, 1991, p. 16). To mark this 37th year of Malaysia’s independence, 20 million foreign visitors were expected, bringing with them about \$8.5 billion to spend. Selamat Datang—Welcome, this is Visit Malaysia Year—1990. Tourism is Malaysia’s third most important tool (after petroleum and manufacturing) in its economic development plan (Sixth Malaysia Plan), and the strategy has paid off as travel to the country has increased 63 percent since 1988. For the Malaysia state of Pahang, tourism has become the top money maker. In 1991 one hotel company

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recorded a \$20.35 million profit for the year, an increase of \$16.85 million over 1990's performance. Still the government wants to increase annual tourist arrivals another 13.5 percent. Can this be sustained? Will this industry be viable for Malaysia in the future?

The purpose of the fieldwork was to determine the capacity of a developing country such as Malaysia to sustain major tourism development. Malaysia has been labeled the perfect travel cure for the stresses of modern life. Tourist brochures claim the country "has it all." Picturesque fishing villages, cozy hill resorts, unexplored tropical forests and miles of empty white sand beaches are mixed with an ethnically diverse people whose cultural differences are intriguingly expressed in traditional arts and crafts, religious festivals and food. Malay and indigenous people make up over half the population (about 15 million) while Chinese, Indians, and British also come under the term "Malaysian." Situated in the middle of South East Asia, with a total land area of 342,000 square kilometers, Malaysia is about the size of Japan. Eleven of Malaysia's states are on the peninsula stretching down from Thailand, and the states of Sabah and Sarawak are across the South China Sea on the island of Borneo. The country's economy is based mainly on agricultural commodities, and it is one of the world's major suppliers of tin, palm oil, and rubber. The economic growth rate is 8 percent and per capita annual income is about US\$3,000. Since achieving independence from colonial British rule in 1957, Malaysia has assumed a parliament form of government. The official religion is Islam (53 percent), but other important religious groups are Buddhist (17 percent), Chinese folk religions (12 percent), Hindu (7 percent) and Christian (6 percent). The literacy rate is 65 percent.

Procedures

We conducted a content analysis of tourism news items published in *The New Straits Times* from September 1991 through March 1992. This national newspaper is published in English and has one of the largest subscriptions in the country. It also serves as the government's voice. Accordingly, the content analysis procedure enabled us to infer tourism impacts in Malaysia by systematically identifying characteristics of messages about tourism from the government's perspective. As this project also served as a way to establish a data-driven descriptive context for further fieldwork on tourism in Malaysia and other developing countries, the results from the content analysis were triangulated with data from interviews with Malaysian tourism officials and tourism site visits.

A total of 296 articles relating to tourism were published during the 7-month study. All articles were included in the analysis. According to content analysis procedures, phrases, sentences, and paragraphs from the articles were unitized, sorted, and classified according to similarities and differences. The data were summarized via absolute frequencies.

Findings

The content analysis of newspaper articles resulted in four themes: image portrayal, development actions, positive impact, and negative impact.

Image Portrayal

Malaysian government and private enterprise efforts to promote an attractive tourism image have been vigorous. In the sample, 29 percent of the articles reported activities and opinions on image portrayal. Their tone was often defensive. For example, special tourist police were reported to be particularly effective in portraying Malaysia's friendliness, as a counter-measure to the images of restrictive Muslim standards. As another example, international press releases declared the bad reputation of east coast Malaysian weather was unjustified. To paint a more positive picture of the monsoon season there, the Meteorological Services Department was requested to be more careful in making its monsoon forecasts as their announcements affect hotel bookings.

Efforts to establish a favorable image have been primarily shaped by "visit year" promotions. Beginning with the "Visit Malaysia Year 1990," then "Visit Asian Year 1992," and again the projected "Visit Malaysia Year 1994," the promotion goal has been on creating a reputation as a destination for shopping, natural beauty, and sports. To accomplish this the federal government has been active in ensuring that the price of tourist goods be competitive, that Malaysia be identified as an ecotourism destination, and that sport tournament locations be selected according to tourist attractiveness. For example, villages have been urged to make themselves an ecotourism attraction:

A bus-load of tourists disembark from a coach at a kampong [village]. The village chief (ketua kampung) and his ecotourism committee greet them as the village girls garland them with beads and flowers. A village youth conversant with foreign languages and a knowledgeable old man familiar with ecotourist resources leads them on a tour of the village. (*New Straits Times*, December 12, 1991, p. 2.)

Malaysia's view is that ecotourism is a tourist attraction with high payoff value. It calls for little investment as it uses local resources rather than expensive imports. As a tropical developing country, with rain forests and coral reefs, it considers itself a logical market for tourists who want an authentic travel experience.

Festivals have also served as a prime promotion tool. Numerous food fairs, handicraft markets, air shows, and traditional dance festivals were held during the study period in hotels, shopping centers, villages, restaurants, and on islands. In most cases, these fell short of their goals. For example, "Pesta Selangor," a month-long outdoor fair, failed to attract enough tourists to cover costs.

While the "visit year" promotions used international media and travel agencies to attract foreign visitors, the

festivals were also considered important to increasing domestic tourism and to persuading tourists to stay longer. For example, in comparison to the 20 million foreign visitors to Malaysia expected in 1994, who will spend about \$8.5 billion, annually there are an estimated 3 million Malaysians who take their holiday abroad, spending about \$1.5 billion. In spite of the sizable net gain, Malaysian tourism officials continue to actively seek ways to retain more domestic tourism. Furthermore, government surveys have concluded that the international tourist spends an average of 4.5 days in Malaysia, lowest in the South-east Asian region.

Development

Efforts to promote a positive image for tourists to Malaysia are not hollow; they are grounded on a high rate of tourism development. Tourism development in Malaysia, a second theme emerging from the content analysis (41 percent of the articles), has perhaps been the largest and most rapid in the region. Between 1980 and 1990, the total capital investments approved for the tourism industry by the Malaysia Industrial Development Authority amounted to \$5.78 billion for 184 projects. Tourist development has been primarily focused on resorts, with secondary activity on tourist attractions and transportation.

Beginning with resorts, in the 3 years between 1988 and 1991, a total of 21 major resort complexes with collectively 13,000 rooms were either planned, began construction, or were completed. So far, almost all resort and hotel developments are in the luxury class designation, in spite of feasibility studies that indicate the greater need is for mid-price accommodations. In Malaysia alone, the projected need is for 130,000 new hotel rooms by the year 2000. To encourage investment the federal government has allocated \$100 million for hotel projects that will serve low and medium budget tourists.

One of the difficulties with the speed of resort development has been in infrastructure lags. Numerous news articles reported the customary practice of opening to tourists before such services as communication and transportation were ready. For example, one new \$200 million beach resort on the west coast of the country was reportedly scheduled to open 2 years before the sewerage scheme would be completed. Nearby, every Saturday night, a 10 mile stretch of hotels, condominiums, and apartments is plunged into several hours of darkness as the overloaded system trips its breakers or burns out a high-voltage cable.

To a much lesser extent Malaysian tourism development is directed toward attractions. Zoos, museums, national parks, marine parks, ecology parks, demonstration villages, restaurants, and historical buildings were common development projects during the study period. One unique attraction is the butterfly park in Kuala Lumpur. In this 80,000 square feet sanctuary to more than 10,000 live butterflies, tourists are able to view the country's rare and protected species.

Transportation is also an important tourism development area. During the study period this was primarily focused on air travel improvements. The national carrier MAS (Malaysia Airlines) and a local company, Pelangi

Air, have worked hard to increase international and domestic routes and services. Motivated by regional projections that by the year 2000 the Asia-Pacific area will account for over 39 percent of the world's scheduled international air passengers with some 46 million people crossing the Pacific annually, 25 million traveling between Europe and Asia, and 130 million journeying between countries within the region, airport and airline infrastructure improvements and expansions are taking place in every realm of Malaysia. On the other hand, in spite of some surface transportation improvement efforts, traveling in Malaysia by train, bus, or car remains a problem. Dangerous roads, inaccessible areas, and a lack of traveler support services continue to mean that most tourists see Malaysia by air.

Tourism's Impact

What has been the impact of such tourism promotion and development? The effect of tourism in Malaysia (30 percent of the articles), both positive and negative, is one of true dilemma. For example, Malaysia benefits economically from tourism—particularly from an infusion of foreign exchange. As one news article declared, “tourism is like King Midas who had the power to turn everything he touched into pure gold” (*New Straits Times*, October 1, 1991, p. 5). This has not always been the case, however. From 1980 to 1990 the tourism industry suffered continuous deficits (blamed on the Gulf War) averaging an annual loss of \$1.15 billion in foreign exchange. Beginning in 1990, the industry has since enjoyed major surpluses. In spite of such economic success, there is also a great deal of foreign exchange leakage. For example, more than 25 percent of all tourist hotels are foreign owned and about 35 percent of the foreign currency spent in the country is for foreign products.

The economic impact dilemma is experienced in other realms as well. On the one hand tourism has created jobs for locals, yet higher level manager positions at hotels and attractions are still more likely to go to foreigners. Sensitivity to this has also played out in the establishment of government policies on tourist development investment quotas for foreigners and incentives for locals. Overall there is some support in the data that Malaysia has passed that initial development phase in which tourism makes its most valuable economic contribution.

Another instance of a simultaneous positive and negative impact of tourism is in terms of culture. On the one hand, tourism has brought about what has been labeled in other studies as “cultural involution” (Smith 1989)—a sharpening of ethnic identity. For Malaysia this is most evident in the revival of established handicrafts such as the wood carvings of the indigenous Orang Asli people, batik, and kite making and flying. On the other hand, Malaysian government officials worry about the negative cultural repercussions, such as maintaining the “goodness” of the Muslim social order. This has been particularly challenging in the face of the popularity of tourism-based prostitution in neighboring countries as well as tourist desires for alcohol.

A third dominant source of dilemma about tourism's impact is in terms of the natural environment. While tourism has created an ethic for proper waste disposal and environmentally sensitive attractions, development has been so rapid that considerable damage has already been done to Malaysia's jungles, wildlife, coral reefs, coastlines, and mangrove swamps. Proposals to develop such destinations as Penang Hill, Genting Highlands, and Frazier's Hill into a "tourist paradise" have led to a belief that there will inevitably ensue a destruction of the very natural resources that attract tourists in the first place.

Several examples may be cited. During the time of the study alone, the giant leatherback turtle population was reduced by the largest number so far recorded. News articles argued that this was directly attributable to tourism. Another problem cited in the articles is the killing of coral from silt leaching into reef areas from nearby resort construction. Yet, the presence of tourists has also helped Malaysia clean up areas contaminated by local settlements and industries. Tourists do not like to see pollution where they vacation, and responding to their demands has resulted in improved environmental conditions as well.

Discussion

While tourism industry officials in Malaysia are well aware of the negative impact of tourism, the intensity of the economic growth strategy enforces a staunch appreciation of mostly positive impact. It truly seems a dilemma. In Malaysia tourism is both exploiting and conserving the natural environment, nudging a loss of traditional values and revitalizing ethnic arts, bringing in foreign exchange and robbing locals of full economic gain. Calls for such

actions as regional cooperation, rethinking the "enclave" pattern of tourism facilities, developing sound management policies, requiring impact studies, encouraging community participation in tourism development projects, and preparing qualified local tourism professionals have begun to address this dilemma.

Yet as with other developing areas in the region (such as Bali in Indonesia) the environmental and cultural impact studies that sometimes accompany development plans come only after decisions to proceed. Likewise, while directing the tourist's interests to ecotourism—to the jungle's beauty and fascinating wildlife—instead of beaches and shopping centers, without careful regulation, even worse ecological damage could result.

Thus, Malaysia's future ability to sustain tourism appears to continue both the positive and negative impact dilemma. Nonetheless the balance does seem to be tipping a bit in the positive direction. Will it be in time?

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Sustainable Practices: Implications for Tourism and Recreation Development

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Abstract—The literature provides no synthesis of information on sustainable development as the concept applies to the actual practice and implementation of planning and design for tourism and recreation. This study identifies the extent to which those in the planning and design professions have integrated sustainable development concepts in their practice. Factor analysis revealed six dimensions of sustainability: (1) energy, (2) wildlife habitat, (3) transportation, (4) education, (5) economy, and (6) citizen participation. These dimensions can help form the basis of the planning and design processes relative to tourism and recreation. For sustainable tourism development to be addressed in practice, professionals must weave these concepts in policy, community and regional scale planning, site design and development, and pre- and post-development planning and design.

We, as a global community, continue to debate sustainable development and whether technology can solve the ecological crises we have created. Global warming, ozone depletion, toxic waste disposal, deforestation, and the loss of biodiversity in flora and fauna all have global significance—a significance about which our society appears to be aware, but to which it has failed to respond. A recent national poll (Clements 1992) revealed that 80 percent of the respondents believed “we are killing ourselves” by what we are doing to the environment today. Yet, at a personal level, the problem is perpetuated by our inability to significantly change lifestyles that degrade the long-term livability and sustainability of our communities. Recreation and tourism development is part of the local and regional planning and development process; it is not a separate process. Those who are involved in the physical development process through policy or design, for example, planners and landscape architects, may have difficulty helping decisionmakers develop recreation and tourism plans and policies that embrace principles of sustainable development.

Many causes of global environmental degradation occur at the local level, prompting attention from divers professions and from international organizations. A 1987 report

of the United Nations World Commission on the Environment and Development popularized the term “sustainable development.” The report “Our Common Future,” also known as “The Brundtland Report,” broadly defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations 1987). As a goal, the concept promised hope of a world society living in harmony with the planet. Put into operation, however, the concept has caused division rather than solidarity. Corcoran (1990, p. 44) observes:

“Sustainable development”: Never have two words been used so much with so much inconsistency...It is fast becoming a landfill site for every environmental idea...For the most part nobody seems to care what the words mean, or whether they even have any real meaning. Have we reached a point where sustainable development has become a hazardous concept?

Who would argue against sustainability? It is easy to become a proponent of the concept, but the term “sustainable development” is ambiguous. Much of the literature focuses on its definition. Miller (1990) offers three definitions culled from 20 sources representing the main thrusts in the literature. The first is the definition from the Brundtland report that states “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The second defines sustainability as “leaving the same or an improved resource endowment as a bequest to the future.” The third definition suggests what the concept of sustainable development does not include and contends that preserving the current stock of natural resources does not define sustainability because the resource base changes as development proceeds. In this definition, preservation applies only to certain assets. This definition differentiates between economic and noneconomic assets, natural or transformed, recognizes those natural resources that cannot be remedied by some technological process such as the ozone layer, and recognizes that change is an ongoing process.

The literature on sustainability has recurring issues, themes and concerns, such as energy, water, soil, wildlife habitat, economy, and citizen participation. Figure 1 presents a matrix of these issues by author.

The information and technology to develop sustainable tourism and recreation areas are available to tourism planning and design professionals, but Berkebile (1992) notes that this information is not being used when designing places for tourism and recreation. We need to examine the degree to which these professions have identified with and embraced sustainable concepts in practice.

In: McCool, Stephen F.; Watson, Alan E., comps. 1995. Linking tourism, the environment, and sustainability—topical volume of compiled papers from a special session of the annual meeting of the National Recreation and Park Association; 1994 October 12-14; Minneapolis, MN. Gen. Tech. Rep. INT-GTR-323. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station.

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Author and year	Energy	Water	Soil and air	Wildlife habitat	Economy	Education and participation	Community values
Berger 1980	✓					✓	✓
Hough 1984/1990	✓	✓	✓	✓	✓		✓
Spirn 1984	✓	✓	✓	✓			✓
Orians 1990	✓			✓			
Van der Ryn and Calthorpe 1986	✓						✓
Koh 1981						✓	
Howett 1987						✓	
Gardner and Roseland 1989	✓	✓	✓		✓	✓	✓
Thayer 1989						✓	
Gordon and Suzuki 1991				✓			
Perry 1990	✓		✓				
Ponting 1990	✓		✓		✓		
Rees 1990	✓				✓		
Axinn 1991						✓	
Brindley 1991						✓	
Fowler 1991	✓	✓	✓		✓	✓	✓
Lyle 1985	✓	✓	✓			✓	✓
Newman 1991		✓	✓	✓			
Owens 1991	✓				✓		✓
Redclift 1991					✓	✓	✓
Spray 1991	✓	✓	✓	✓	✓		
Darmstadter 1992	✓	✓	✓		✓	✓	✓
Totals	14	8	10	6	9	11	10

Figure 1—Review of literature and issues of sustainable development.

Purpose

A preliminary review of the literature provides no synthesis of information on sustainable development as the concept applies to the actual practice and implementation of planning and design at the community and regional scale. Only generalizations and propositions are provided. No one has identified a way to measure the degree that sustainable development concepts are used by practicing planning and design professionals.

The work of planners and landscape architects are conceptually complementary and directly tied to land use and development. Typically, planners are involved at the policy level and landscape architects are involved at the design and physical development level. Many of the sustainable development concepts identified in the literature address both policy and design concerns. Planners and landscape architects have a potential voice on how community and regional development proceeds. For example, if a community chooses tourism as an economic development strategy, tourism and recreation development proposals must be considered like any other development proposal within the context of local planning guidelines.

In our study we identified the dimensions of sustainable development according to planning and design professionals, the level of attention professional planners and landscape architects should place on each issue in the future, and specific issues related to tourism and recreation development. Our study focussed on planners and landscape architects in the U.S. Pacific Northwest.

Methods

Questions measuring sustainability were originally developed using information from previous literature (fig. 1). Additional items were then included on the basis of information provided by a review of the instrument by selected planners ($n = 4$; two from Oregon, one from Hawaii, and one from California), landscape architects ($n = 5$; two from Oregon, three from Hawaii), and planning and landscape architecture educators ($n = 4$; three from Oregon and one from Hawaii). The review of the draft survey by these selected experts also served as a check for content validity. We used literature reviews and key word searches; we identified issues and trends and studied practitioners' and educators' comments and reviews of question design and content. A five-point Likert-type scale was also used.

A proportionate random sample of professionals from Oregon, Washington, and northern California was selected from the membership list of the American Society of Landscape Architects (licensed landscape architects only) and from the American Planning Association's list of the American Institute of Certified Planners. Three separate mailings provided a response rate (adjusted for nondeliverables) of 58 percent ($n = 264$).

To identify items that shared common sustainable-development characteristics, a factor analysis and a coefficient alpha computation were used. Items with corrected item-to-total correlations below 0.50 were eliminated (Bearden and others 1989; Zaichkowsky 1985). The minimum coefficient for factor items to be included in the final survey was 0.40 (Nachmias and Nachmias 1987; Tinsley and Tinsley 1987). Items deleted using this technique were either those

that loaded on more than one factor or had a low factor coefficient. The remaining items were identified as the core dimensions of sustainable development.

Results

Factor analysis procedures revealed six factor structures using 28 of the 42 items. These dimensions were identified

as: (1) energy, consisting of four items; (2) wildlife habitat, five items; (3) transportation, five items; (4) education, six items; (5) economy, four items; and (6) citizen participation, four items. The alpha scale coefficient for the 28 items was 0.8819, indicating that the 28 items adequately represent the construct (perceived importance of sustainable development concepts used in practice). The factor coefficients and alpha levels for each of the six factors are presented in table 1. The identified factor structure in this

Table 1—Alpha and factor coefficients of scale items and subscales.

Scale items and subscales	Factor coefficient	Subscale alpha coefficient
Energy dimension		0.7422
Passive solar design principles should be a major determinant of building orientation in site development	0.7344	
Plant materials should reduce direct solar heat load and ambient air temperatures	.7071	
Sustainable development concepts are integral to land planning and design for energy conservation	.4233	
Plantings, particularly along major highways, should be used to reduce levels of particulate air pollution	.4187	
Wildlife dimension		.7956
Significant native plant and wildlife communities should be protected, preserved, and enhanced in urban areas	.7315	
Diverse wildlife habitats in urban areas are important	.7199	
Wildlife corridors need to be created to link important wildlife resources	.6694	
Development should increase the habitat potential for indigenous wildlife	.5419	
Channelized riparian corridors should be restored and/or rehabilitated	.4579	
Transportation dimension		.7269
Pedestrian friendly urban design is important	.7283	
Well designed, connected urban bikeway systems are important	.6719	
Compatible mixed use development is important to minimize transportation needs	.6622	
Site development should consider alternatives to private vehicles	.6165	
Community development should encourage higher densities to minimize transportation needs	.4842	
Education dimension		.7171
The planning and design process should be educational for the public/client	.7515	
All parties, including representatives of the group(s) who will benefit or who will be harmed by a project, should be involved in the development process	.6229	
A multidisciplinary team, including specialists from the same region, should look at social, economic, cultural, and environmental elements of a project	.5272	
Economic growth must promote social development and environmental health	.5085	
Development should address geological hazards and resources that exist on site and in its immediate neighborhood	.4645	
Inform communities that floodplains should be used for recreation and open-space systems	.4451	
Economy dimension		.6518
Home businesses should be a part of the residential neighborhood	.7442	
The purchase of goods and services should preference those of the region	.5204	
Gray water should be used at the residential level for garden needs to conserve water	.5112	
Site planning and construction should minimize disturbance of top soils, decreasing site reconstruction costs	.5054	
Citizen participation dimension		.6052
The level and extent of development should reflect local values and desires of the residents	.7273	
Minimizing the size of development is important	.6358	
Persons benefiting from or hurt by a project should have the power to make critical decisions about the project	.5604	
Development should focus on qualities that make a place more enjoyable	.4557	

study is similar in content to the issues of sustainable development identified in previous literature (fig. 1).

Respondents also ranked items based on the priority that their own profession would place on a particular issue in the future. Future priorities were categorized into various concerns—site and development, wildlife habitat, citizen participation, and process (table 2).

Items specifically identified as having future impacts on tourism and recreation include: (1) revising building codes to encourage alternative energy sources, (2) using solar design as a determinant of building orientation in site development, (3) using plants to reduce direct solar heat load, (4) encouraging higher densities, (5) emphasizing the importance of urban pedestrian design, and (6) creating urban bikeway systems. Additionally, future issues about site development included considering alternatives to automobile transport at the site level and considering on-site composting. Both groups agreed that minimizing the scale of development will be an important future priority for quality developments.

Table 2—Professional practice priorities for the future.

Priorities for the future	In rank order
Site and development concerns	
Site development should consider alternatives to cars	1
Encouragement of higher densities	2
Importance of urban pedestrian design	3
Urban bikeway systems	4
Solar design as a determinant of building orientation in site development	5
Revise building codes to encourage alternative energy use/sources	6
Composting on site	7
Use of plants to reduce direct solar heat load	8
Developments should focus on qualities that make a place more liveable	9
Planning and design in the future should be regionally responsive	10
Development should reflect local values and desires of the residents	11
Minimizing the size of development	12
Wildlife habitat concerns	
Using floodplains for open space and recreation use	1
Retaining storm water on site for aquifer recharge	2
Importance of restoring channelized riparian corridors	3
Provide wildlife habitats	4
Maintain a diversity of urban trees	5
Maintenance programs should not disturb or damage animal mating and nesting sites	6
Citizen participation and process concerns	
Economic growth must promote social development and environmental health	1
All project stakeholders should be involved in the development process	2
Using a multidisciplinary team of specialists (social, economic, cultural, and environmental) for projects	3
Communicating the design intent of projects to maintenance workers	4
Citizens should have the power to make critical decisions about the project	5

Planners felt that developments should reflect local values and desires of the residents and should focus on qualities that make their communities more livable. Economic growth must promote social development and environmental health. They felt that people who either benefit or who are hurt by a project should have the power to make critical decisions about the project, and that all project stakeholders should be involved in the development process. Landscape architects felt that future planning and design should be regionally responsive. They noted that communicating the design intent of projects to maintenance workers and using a multidisciplinary team of specialists (social, economic, cultural, and environmental) for future projects will be important priorities.

Future wildlife habitat priorities included providing wildlife habitat along with the development, providing maintenance programs that will not disturb or damage animal mating and nesting sites, diversifying urban tree species, restoring channelized riparian corridors, retaining storm water on site for aquifer recharge, and using floodplains for open space and recreation use.

Conclusions

Planners and landscape architects are, theoretically, in the best position to change the way we develop successful tourism destinations. These professionals work at community, regional, and site scales. They address problems at the policy level regarding predevelopment as well as post-development issues, and they are sensitive to the process used to initiate change.

Sustainable development literature suggests that development and environmental protection can be complementary, not antithetical. Our planning and development processes for tourism should include considerations for site and development concerns (environmental issues), for wildlife habitat concerns and needs, and for a thorough citizen participation process and program. (Donovan 1993; Friedman 1993; Lankford 1994; Lankford and Howard 1994; Lankford and Knowles-Lankford 1994; Lankford and others 1994; Miller 1992). Tourism planning must be within the scope of the community development process. When viewed outside the arena of mainstream planning and local development procedures, developments are often counter to local norms, customs, and desires.

Many professionals acknowledge that creating a sustainable future will require enormous change by professionals and by the general public. The breadth and depth to which the design and planning professions have addressed aspects of environmental quality and sustainability is commendable. Yet, we continue to build tourism destinations that support tourism and recreation activities but have minimal capacity to sustain the human life for which they are intended, and the rest of the biosphere is not even considered. Is it that designers—landscape architects, architects, and planners—play only a minor role in the tourism development process? We have the tools. We have the information. Do we implement sustainable concepts in practice? Or are we participating in a conspiracy of inaction?

We recommend that decisionmakers and developers work with those professions that deal directly with land use and development (planners and landscape architects) to help them incorporate sustainable concepts and solutions into plans for tourism-based communities.

Six dimensions of sustainable development have been identified through the research that have direct implications to tourism—education, transportation, wildlife habitat, energy and microclimate, citizen participation, and economy. For sustainable tourism development to be addressed in practice, tourism planners and landscape architects must weave these concepts into policy, planning at a community and regional scale, site development, planning and design processes, and pre- and post-development planning and design.

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Understanding the Market for Sustainable Tourism





Understanding the Market for Sustainable Tourism

Paul F. J. Eagles

Abstract—Sustainable tourism refers to a broad range of recreational activities occurring within the context of a natural environment. An emerging consensus is that sustainable tourism has identifiable niche markets, each with a unique set of characteristics. Four such niche markets—ecotourism, wilderness use, adventure travel, and car camping—are discussed within the context of extrinsic and intrinsic motives, environmental attitudes, social motives, demographics, economics, social constraints, environmental impacts, travel profile development, business cycle, use levels, key management issues, and market opportunities.

The World Commission on Environment and Development defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Owen and others (1993) argue that sustainable tourism development in Wales should follow several key principles, including:

- Tourism should be one part of a balanced economy.
- The use of tourism environments must allow for long-term preservation and for use of those environments.
- Tourism should respect the character of an area.
- Tourism must provide long-term economic benefits.
- Tourism should be sensitive to the needs of the host population.

The North American concept of sustainable tourism development also accepts these principles, but the discussion is often limited to tourism based on natural environments. We used the latter approach, defining sustainable tourism as tourist use of natural environments where long-term economic benefits, continuous environmental protection, and local community development are inherent. We emphasized North America, as both a tourist destination and a tourist source.

Understanding the market means understanding the place, goods, consumer preferences, demand, available opportunities, and the enterprise of buying and selling. This is much more than just advertising. Advertising should take place only after there has been extensive research about the market.

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Understanding the market for sustainable tourism in North America involves understanding the tourists, the tourism environments, and the interrelationships between the tourists and their hosts. Mahoney (undated) points out that market strategies designed for the mass market often result in products, prices, and promotions that are not appealing to potential customers. He suggests that recreation marketing needs to be based on market segmentation and target marketing. Market segmentation is the process of (1) grouping existing and potential visitors with similar preferences into groups called market segments, (2) selecting the most promising segments as target markets, and (3) designing marketing mixes that satisfy the special needs, desires, and behaviors of the target markets.

We support Mahoney's ideas of market segmentation and will discuss four distinct, nonconsumptive forms of sustainable tourism. Recreation activities with consumptive intent, such as hunting, are not discussed.

Ecotourism, wilderness use, adventure travel, and car camping are popular outdoor recreation activities and are the four niche tourism markets examined. Because of the many people involved in these activities, a tourism industry has developed around each of these four groupings. In most studies of sustainable tourism, these four categories are merged into one grouping, usually called "ecotourism," "adventure tourism," or "sustainable tourism" (Hall 1991; Tourism Research Group 1990; Wild 1992). This approach is confusing and needlessly mixes distinct activity classes. It is important to recognize that the market for sustainable tourism is large enough that the specific submarkets are best managed with their specific characteristics in mind.

These niche markets have identifiable and important differences. Wight (1993) argues that sustainable tourism involves a spectrum of experiences, supply characteristics, and market demands. Better understanding of the niche markets and of the consumer has important research and market implications and is critical to the development of suitable services. Appropriate services lead to more value-added products and higher positive economic impact. Market differentiation leads to higher consumer satisfaction, higher return rates, and a mature business climate. Much of sustainable tourism is characterized by small businesses, and it is wiser to target small market segments that are now underserved than it is to tackle larger segments that are difficult to handle and already have a great deal of competition (Mahoney, undated).

These four sustainable tourism sectors have similarities. Each has a strong philosophical base that has developed with associated literature, art, and culture.

Sustainable tourism and historical tourism are unusual because there is a large volunteer sector associated with the activities, acting as educators, issue identifiers, action

arbitrators, and lobbyists. These groups have a large influence on consumer expectations and behavior. They also strongly influence the various service sectors, serving as activity organizers and land managers.

Sustainable tourism has strongly held attitude sets that may influence others. However, the individual recreationist cannot affect the tourism industry except as a product consumer. But as a member of a group with a shared philosophy, the individual's influence is enhanced; therefore, there is pressure to join and maintain groups in the voluntary sector.

These four niche markets are closely tied to government. Because of the need for natural environments with a set of specific characteristics, governments are lobbied to set aside land from the public domain that has these characteristics. Government agencies are responsible for allocating access, for managing the natural environment, and for setting behavioral objectives.

The understanding of the market for sustainable tourism requires recognition of the uniqueness of the recreation product. Parks and recreation products are service products that are fundamentally different from most consumer products. We outlined those differences that, when recognized by tourism planners and managers, lead to a better integration of tourism demand and supply.

The activities discussed in this paper are centered in those cultures developed in northern Europe, specifically with those people with the Germanic languages (German, Dutch, English, Swedish, Norwegian, Danish). Therefore, the activities are centered in those countries with these traditions, most importantly, Great Britain, Germany, Netherlands, the Scandinavian countries, Canada, United States, Australia, and New Zealand. These countries provide the bulk of the consumers for these activities and are also the main providers of the locales for the activities. One main issue in the last decade has been the touristic invasion of peoples, with natural environment-based activity demands, into parts of the world with different cultural imperatives (Pleumaron 1994).

Parks and Recreation Marketing

Parks and recreation marketing is different from the marketing of manufactured goods. Mahoney (undated) discusses some key aspects of recreation that must be considered in developing an understanding of this unique outdoor market. Ten of these principles are outlined below and express the uniqueness of the outdoor recreation product compared to a typical consumer product:

1. Outdoor recreation experiences are consumed on site, well away from home.
2. Travel costs to the site often far exceed the costs at the site.
3. It is a package of facilities and programs that attracts people to a site or area.
4. Recreation experiences are ephemeral and experiential; they cannot be possessed except as memories.
5. The production, delivery, and consumption of the recreation product occur simultaneously.
6. The consumer is actively involved in the production of the experience, both their own and those of others.

7. Poor recreational experiences cannot be returned for a refund.

8. Recreational sites and experiences are difficult to assess before purchase; therefore, word-of-mouth from friends and family is an important choice determinant.

9. Recreational products cannot be stockpiled during periods of low demand and sold during times of excessive demand.

10. Important aspects of the recreation experience occur before and after the on-site participation.

Ecotourism involves travel for the discovery of and learning about wild natural environments. Wilderness travel involves personal recreation through primitive travel in natural environments that are devoid of human disturbance. Adventure travel is personal accomplishment through the thrills of dominating dangerous environments. Car camping is safe family travel in the interface between the wild and the civilized. Table 1 contains a summary of the key principles outlined in each section of the paper.

Focus

Ecotourism has a strong focus on learning and discovering nature. Ceballos-Lascurain (1987) captures the essence of ecotourism with his definition:

...travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (as quoted in Filion and others 1992).

Nature is best experienced in a wild and free form, but if observation and species' habitat can be improved by landscape manipulation, it is encouraged. Ecotourists are primarily interested in improving their knowledge. High levels of sophisticated information, careful study, documentation, and increased understanding are key attributes (Eagles 1992).

Wilderness travel provides psychological and physical benefits by experiencing wild areas with a minimum of development influences. Nature must be free of the soiling influences of modern peoples. The search is for personal redemption through challenge and sacrifice, and nature is the backdrop to an intensely personal experience. Wilderness is an important concept in the United States, more so than in any other country. Stankey (1987) describes this American wilderness idea as:

...those areas where management objectives feature protection of the natural processes that have shaped the physical-biological character of the setting. Mechanized access is prohibited or greatly restricted as are resource exploitation activities. Recreation is a legitimate use, yet subordinate to the goal of environmental preservation.

The political strength of this idea in the United States bore fruition in 1964 with the passage of the Wilderness Act (Lucas 1987). By 1985, 455 areas with 89,000,000 acres of land were designated by the Act (Ranney 1987). The Wilderness Act allows for designation of Wilderness on any Federal land. By comparison, in Canada wilderness areas are more limited. Where they do occur, they are areas that are designated in national and provincial parks.

Table 1—Sustainable tourism analysis.

	Ecotourism	Wilderness travel	Adventure tourism	Car camping
Focus	Extrinsic focus on nature beyond the person. Strong learning goals.	Intrinsic search for recreation within the purity of nature. Personal development.	Intrinsic search for challenge and adventure within the power of nature. Personal accomplishment.	Intrinsic search for social cohesion within family/friend context.
Environmental attitudes	Dominant-Ecologicistic and naturalistic: learning about nature for its own sake. Recessive-Aesthetic: experiencing the beauty of nature.	Dominant-Aesthetic: search for the perfect environment for reflection. Recessive-Moralistic: develop a personal and environmental philosophy.	Dominant-Dominionistic: personal accomplishment within the context of conquering nature. Recessive-Utilitarian: use nature as a product.	Dominant-Utilitarian: nature a source of personal social benefit. Recessive-Naturalistic: experiencing nature first hand.
Social Motives	Meet people with similar interests. Small group desired, but balance between viewing efficiency and cost efficiency. Groups 1 to 25. Low to moderate social carrying capacity limits.	Personal growth enhanced within small group: 1 through 10. Close emotional contact important. Very low social carrying capacity limits.	Wide range of group sizes. Larger groups give more emotional support. Very large groups possible: 1 to 50. High social carrying capacity limits.	Any sized group: 1 to 100's. Individual restricts social contact to desirable companions. High social carrying capacity limits.
Demographics	Highly educated in any discipline but natural sciences important. Any age.	Highly educated in any discipline but humanities and arts emphasis. Ages 20 through 40.	Average education level. Physical education valued. Youth with ages 15 through 30.	All education levels. All ages.
Economics	Medium impact. Highly dispersed in small numbers. High expenditure levels per person.	Low impact due to low social carrying capacity. Medium to low expenditure levels. Most expenditures not at destination.	Moderate impact. High numbers in selected areas. High expenditures on specialized equipment.	High impact. Large numbers of people, high expenditure levels, especially on equipment.
Social constraints	High level of dedication to activity. Social constraint rules inherently based on coherent philosophy. Sensitive to rules.	High level of dedication to activity. Social constraint rules inherently based on coherent philosophy. Sensitive to rules.	Variable level of dedication. Constraints due to safety. Personal thrill more important than rules. Constraints consciously ignored.	Variable levels of dedication. Constraints socially based. Social cohesion important. Accepts most environmental rules.
Environmental Impact	Strongly positive due to inherent environmental protection philosophy. Personal satisfaction dependent upon high quality environment. Demands nature protection.	Strongly positive due to philosophy that requires pristine environments for personal search for meaning. Sensitive to quality of life measures.	Inherently negative. Goal is personal accomplishment by conquering self through nature. Environment protection not needed.	Variable impact. Social goals paramount but appreciation of natural environment widespread. Open to conservation messages.
Profile development	Informal environmental education very important: nature films, naturalist groups, wildlife books. Formal environmental education movement a major influence in last 2 decades.	Writings of key wilderness philosophers important. Wilderness advocacy groups spread the message effectively.	Popular media, sports groups important. Personal development through conquering nature a very old western philosophy.	Diverse sources: childhood experiences, camping industry, media, camping clubs, government advertising, schools.
Business cycle	In growth phase. Under rapid development but still immature.	Mature. Low carrying capacity, large area requirements, and limited area availability results in an activity at capacity.	Mature. Some international growth possible. Overuse a problem in many locales. New development will take place in novel locales.	Mature. In a steady state. Decline probable. Oversupply of facilities.
Use levels	Low, but growing rapidly.	Low and must stay that way.	Moderate. May decline due to displacement and the aging population profile of market societies.	Mature. Will probably decline due to the aging population profile of western society.
Key management issues	Development of operational standards dealing with: limits of acceptable use, acceptable behaviors, operator training, information provision.	Inherent limitation on user numbers, on size of areas, on acceptable areas, and produces a finite market capacity. Allocating access important to future issues.	Further development of use restrictions to limit negative environmental impact. Liability issues may limit industry. Conflict with ecology building.	Movement from camping to roofed accommodations will occur. Aging population may cause use decline.
Market opportunities	Worldwide potential for park agencies and private service providers. Cooperation between park managers and private service providers emerging trend. Long-term success will depend on economic benefits to local populations.	Demand centered in U.S. society. Finite limit to supply of suitable areas. Canada and Australia can provide overflow supply capacity, due to U.S. overdemand and undersupply. Little supply growth can be expected outside Canada and Australia.	Worldwide potential. Limited age profile. Development limited by liability concerns and aging population structures. High specialization to specific activities will continue to occur. More internal niche submarket development.	Stable market, no growth expected. Several practical restrictions to supply must be overcome to enlarge the market. Attraction of European campers to North America a growth possibility.

Adventure tourism is based on challenge and winning. The challenge is chosen within nature's dictates, but technological accouterments are allowed within limits. The goal is to gain thrills, excitement, and accomplishment. Nature is but a stage for the human play. Adventure travel involves strenuous, outdoor vacation travel, typically to remote places renowned for their natural beauty and physical attributes, involving hazardous activities. Typical activities include mountain climbing, white-water rafting, and deep sea diving. Some authors define adventure tourism as hard ecotourism, which is nature tourism with a strenuous physical activity component (Durst 1986). Such an approach ignores the fact that ecotourism, as defined in this paper, can have a range of activity levels from passive to strenuous, and that there is a fundamental attitude difference between nature study and nature conquering.

A camp is a place in the country that offers simple group accommodations and organized recreation or instruction, as for vacationing children. Car camping is invariably a social event. It is celebration of friends and family within an environment that is an amalgam of urban and wild. The wild is partially tamed so that it is easier to use. High levels of technology are allowed—even celebrated. A wide diversity of interests, activities, levels of solitude, and environmental quality occur. The primary focus is social gratification within seminature. Instruction and learning are inherent, especially for children.

Environmental Attitudes

Personal philosophy produces an associated set of behaviors. An understanding of the conceptual background helps us understand the activities undertaken by recreationists.

The primary environmental attitudes about ecotourism concern the issues of wilderness, national parks, birds, tropical forests, and wildlife (Eagles 1992). Nature without the soiling influence of people is celebrated; low levels of human presence, except for conservation purposes, are desired. The human heavy hand is encouraged if it helps attain ecological conservation goals. This latter idea is an important departure from the wilderness perspective where any human intervention is discouraged. The observation of natural features is best done first hand, but films and books suffice when personal contact is not feasible. Ecotourists hold their environmental attitudes strongly, and they have no hesitation in forcing a set of desired behaviors on others. Activities such as bird watching, wild flower photography, and reef snorkeling are reflections of these attitudes.

The primary environmental attitudes of wilderness travelers concern knowing and experiencing wild nature. This nature, ideally, should not contain humans, except for a select few. Nature must be unfettered. People must only experience this wild environment in a nontechnological form. Human power is the primary form of travel. In the United States hiking is paramount, in Canada it is canoeing.

Adventure tourism needs environments that provide physical challenge. The individual traveler looks for specific places that provide a route to accomplishment. The environment is there to be conquered, not loved. Environmental

protection, pristine qualities, and preservation of diversity are not important. Hazardous environments, remote challenge, and access for use are important. White-water running, mountain climbing, and ocean diving are common manifestations of the search for physical challenge.

Car camping involves a wide range of environmental qualities and relationships. The car camper wants moderate levels of personal comfort and selects environments that are accessible and safe. Environmental quality is important, but only after the required services and facilities are provided. The natural environment is celebrated, but low levels of knowledge, solitude, and challenge are typical. Important reasons for selecting a particular park and campground are convenience and location, with previous visitation, and enjoying nature secondary (Murray and others 1994; Ontario Provincial Parks 1992).

Social Motives

Ecotourists are personal and reflective. Other people are allowed to enter their personal space under specific circumstances. People who help the ecotourist to find, observe, and understand wild nature are actively sought. Other travelers who make the trip cost efficient are tolerated. Ecotourism is primarily concerned with an individual search for learning and for the associated personal development, and no specific level of social contact is required to make the experience worthwhile.

Wilderness enthusiasts like solitude, usually with a small group of friends. The recreation motives are intensely personal. Other peoples' presence is wanted as long as they also want to develop themselves through the wilderness search. Large groups of people are intensely disliked. Technology takes away the level of personal challenge and denigrates the experience by introducing a higher level of comfort.

Adventure tourists are seeking challenge by conquering nature. This motivation is intensely social. Adventure seekers want others to know that the challenge has been met, and their emotions feed off others who are also meeting the challenge. This is a team sport, and large groups of recreationists are the norm. Group size is limited by safety and technological factors, not by social factors. Lucas (as reported by Roggenbuck and Lucas 1987) found that adventure recreationists had larger groups than wilderness travelers.

Car campers are intensely social. They like to have friends and family around. For example, only 3 percent of the camping in Ontario Provincial Parks is done by only one person. The average group size varies from one to more than 10 at a campsite. Very large groups often occur, and they are placed in specially designed group camp sites (Ontario Provincial Parks 1990, 1992). Environmental constraints are often the size-limiting feature. Social constraints are not usually a limiting factor.

Sociodemographics

Ecotourists are of all ages. People in the older age groups have higher levels of ecotourist participation than occurs in the general population. Both sexes participate equally.

High levels of formal education, and the associated income levels, are influencing factors for those of mature ages (Eagles and Cascagnette 1995). Major interest in ecotourism is from people and cultures that have developed in Northern Europe. The United States, Canada, Great Britain, Germany, and the Netherlands provide major sources of international travelers in this category.

Wilderness users are predominantly young males with high levels of formal education. People in the older age groups, such as retirees, have lower levels of participation, probably because of the high levels of physical activity required. Moderately high incomes occur. Because there is strong and continuous dedication to the activity, the average wilderness user has high levels of previous experience (Roggenbuck and Lucas 1987).

Adventure tourists are young and healthy, and often have a high level of interest in sports. They have higher than average income levels. Use levels drop as participants age and become more conservative.

Car campers are of all ages. Both sexes participate equally. All income levels are represented, except for the poor (Ontario Provincial Parks 1990). Car campers, once they have found their favorite spot, return frequently (Murray and others 1994).

Economics

Filion and others (1992) estimated that worldwide in 1988 there were 235,000,000 international ecotourists. The economic impact was US\$233 billion. This figure is low because the ratio of domestic travel to international travel is at least 10 to 1. Filion's figures, on what he calls ecotourism, are really a discussion of the broader group of activities that are grouped under sustainable tourism in this paper. His estimate shows that sustainable tourism based on natural environments is a substantial economic activity throughout the world.

Ecotourism is a moderate, but growing, part of the tourist market. The financial impacts are greatest in rural areas near important ecotour attractions. Some countries, specifically Costa Rica, Kenya, and Australia, depend heavily on this market.

Wilderness tourism is a large market in the United States, which has the most people with this activity profile and also has the most wilderness destinations. Canada is developing many wilderness areas because of the actions of internal wilderness advocate groups, and they are preparing for an increasing number of United States wilderness travelers.

Adventure tourism has become a worldwide activity. In some locales, white water, mountains, and coral reefs attract such large numbers of adventure tourists that allocation of access is an important management issue. The Colorado River that runs through the Grand Canyon in the United States, the Mount Everest area of Nepal, and the barrier reef in Belize are experiencing high use levels. Robinson (1994) reports that adventure tourism development in Sagarmatha National Park in Nepal, the area containing Mount Everest, has brought prosperity to the region; and the local Sherpa people still maintain their cultural identity and control over their land and resources.

Car camping has the highest level of economic impact of the four tourist sectors. The huge number of people involved, the large supply of destinations, and the large capital and operating expenditures result in important economic impacts.

Social Constraints

Ecotourists have high levels of dedication to their activity, associated with a strongly held and coherent attitude set. They have an environmental philosophy that is well developed and that is reflected in many other cultural forms, such as literature and art. Their philosophy guides their travel actions. The resultant social rules are widely developed and widely transmitted to others. Travelers are sensitive to these rules as long as the rules fit within their attitude set. They work hard to force their rule set onto others, using all of their economic and social power to influence, often forcefully, the social and political structures to reflect the rules that they have developed. This is a powerful group, and it is rapidly gaining more influence.

Wilderness users have the most coherent and well-developed set of philosophical treatises of any outdoor group. The roots of their concern go deep into the early Judea Christian idea of seeking re-creation in the wilderness so that the challenges of life can be better met. More recent writers, developed from the liberal Protestant branch of Christianity in the United States, have developed the philosophy further, without reference to the early roots but with the entrapments of a social code echoing religious views. This philosophy says that wilderness is a wild place where people visit but do not remain, where they enter for only short periods, and where they seek personal re-creation through the challenge posed by free nature. This view is widely and strongly held in the United States. It is present, but not as strong, elsewhere in North America and Northern Europe. However, those that hold the view are proselytizers and have a political power well beyond their numbers. They take an active political role in ensuring, as much as their efforts can reach, that strong social constraints are imposed to keep wilderness free of people and denigrative activities.

The adventure people are allied with those who like sport, seeking personal physical challenge, high levels of physical activity, and danger. Their level of dedication varies from lukewarm to red hot. Social constraints are imposed for safety and liability reasons. The personal thrill is much more important than the rules, and as a result the social constraints are easily ignored. The search for the thrill can lead to high levels of danger, and injury and death are used to define the limits. Group activity is the rule, and social group rules are often quite sophisticated. High levels of training, advanced equipment, and intrusive development occur.

Car campers are diverse. There are varied levels of dedication to the activity and to the shared action. Social rules are loosely developed through consensus and for interactions within the family or friend group. Concern about others is secondary to the social contact impulses of the nuclear group. Social cohesion is important and friendliness to others is considered a virtue. Social and environmental rules are sought and obeyed.

Environmental Impacts

Ecotourists have high levels of environmental conscience. Their internal environmental philosophy dictates that nature must be protected and celebrated within a natural context, resulting in a superabundance of environmental protection rules, policies, and laws. The protection of significant examples of wild nature in parks results in strongly positive environmental impacts. Ecotourism provides economic and social incentives that further the cause of environmental protection. However, because of the relative newness of ecotourism outside of North America, many countries are struggling to develop institutions to handle both the environmental protection mandates and the associated recreation impacts (Valentine 1993). As ecotourism moves from the experimental wanderer stage to the mainstream tourism sector, it is essential that management institutions be in place, or negative environmental impacts will be major.

Wilderness enthusiasts have major influence in the United States but less impact elsewhere. Their strongly held personal philosophy requires pristine environments for the personal search for meaning. As a result, seeking protection for large areas is widespread in the United States and is a positive environmental activity. The media and other social influences of the United States are spreading this view around the world, with varying impact levels. Wilderness users are sensitive to quality of life measures, and they try to enforce these measures in both the wilderness and at home.

The adventure tourists are using the environment as a place to fulfill a challenge. The goal is personal accomplishment, not environmental purity. Environmental protection is not part of the goal and is not required for the activity. Therefore, the environmental impact is at best neutral, but more realistically it is negative. Environmental degradation, often in sensitive areas, is common (Gregory 1994). Adventure tourists have a positive environmental impact when they start to value the environments they have visited and then ally with the environmental groups for political action.

Car campers recreate in a world between the urban world and the wilderness world. They take high levels of technology, lots of equipment, and intrusive activities into areas that are specially developed to handle this use. Car campers have a definite, but limited, negative impact because of their need for space, services, and supplies. They have an appreciative attitude about wild nature and consciously agree to limit their impacts to select areas and in select ways. They like to know that large amounts of wild nature exist, and they support protective efforts. Even though car campers have weakly held protection attitudes and are very large in numbers, their overall environmental impact is positive.

Profile Development in Society

Ecotourism is developing along with a worldwide societal consciousness about nature protection. Informal education

is important in developing the attitude set and expectations about the value of nature. Nature films, naturalist clubs, and wildlife books are three important carriers of the environmental message. Nature films and videos shown on international television are critically important. For example, the National Geographic Film "Rain Forest" has raised the profile of Costa Rica throughout North America, and the Academy Award winning movie "Out of Africa" is the direct promoter of large numbers of tourist visits to Kenya each year. Formal environmental education, a major force in North America in the last two decades, is now producing many environmentally literate adults who value nature and want to learn more, with ecotravel as an obvious outlet. Childhood experiences with car camping are important attitude setters. All these influences produce the background to the growing ecotour market.

Wilderness ideas are rooted in well-defined literature in the United States. The tourist profile develops as this literature spreads through the action of wilderness advocates, often within the context of formal organizations in both the volunteer and government sector. Wilderness advocacy is a favorite of the intelligentsia, and social diffusion has spread the idea from the literati. Personal contact with tame nature in childhood, with car camping, and with environmental education programs provide a basis for the wilderness search later in life. The ideas have reached the highest levels of political power in North America, as exemplified by Theodore Roosevelt in the United States and by Pierre Trudeau in Canada.

Personal development through the conquering of nature is an old Western European concept (Marshall 1992). In adventure travel, this idea is modified to allow for the climb or run in an organized and socialized manner; however, the underlying concept remains the same. Because of the ubiquitous nature of the idea in society, there is no one clearly identifiable source of this idea. Adventure travel has well-developed social structures that help the activity. Organized sport is powerful and widely followed. It is a short jump from participation in an athletic game to participation in an outdoor sport. Adventure clubs are widespread and well organized. The Alpine Club of Canada is one example of an organization that has developed an activity (alpine exploration in the Rocky Mountains), developed a set of normative rules of behavior, and has developed an organizational structure to facilitate a recreational activity (Reichwein 1994). There are dozens of such groups in the adventure travel market.

The car camping industry developed after World War II as rapid population growth, prosperity, more free time, better road systems, and widespread car ownership occurred simultaneously. In the 1950 to 1970 period, children had much more free time than did their parents in their youth, and much of this leisure time was directed toward outdoor activities (Killan 1993). The use levels in camping increased dramatically after 1950 and peaked in the 1970's. This is now a steady state industry, with the loss of the aging participants being replaced by new recruits. People become familiar with camping recreation through personal participation in childhood, through the widespread supply of destinations, through government promotion of parks, and through advertising by equipment manufacturers.

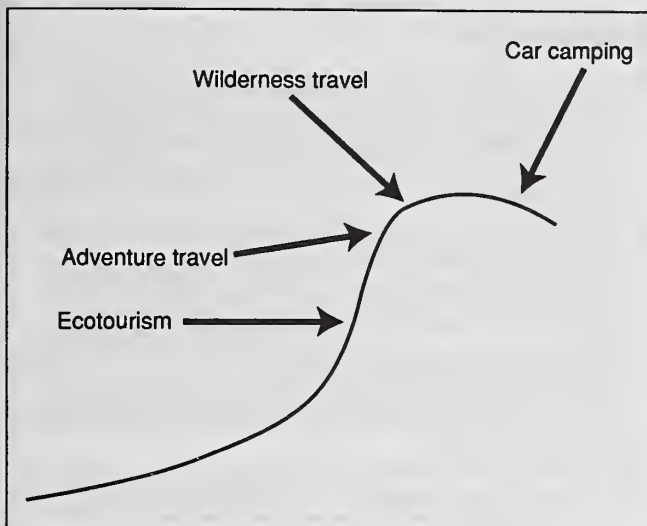


Figure 1—Sustainable tourism business cycle.

Business Cycle

Ecotourism is in the growth stage of the business cycle (fig. 1). The use level of ecotourism is low but growing rapidly. Increasing participation, more market supply, more private development, and higher media profile are expected.

The use level of wilderness travel is low and must stay that way. Wilderness travel is at a peak, with more demand than supply in the United States, but elsewhere the supply exceeds the demand.

The use level of adventure travel is moderate, and it is growing. More destinations and more sophisticated supply opportunities are being developed. In the long term, use may decline because of the aging population in the key tourist markets. Environmental limitations being imposed because of environmental degradation may also cap increases in the most popular destinations.

Car camping use levels are high. Supply exceeds demand everywhere, except at peak times and in select locales near cities. Car camping is overmature and may decline as the population ages and as more supply develops.

Key Management Issues and Market Opportunities

The changing population demographics, both in North America and in Northern Europe, will have profound implications for sustainable tourism. The median age of the population is increasing as the large baby boom generation moves into late career and retirement ages. Age is an important factor in recreation participation. Foot (1990) points out that as people age, active, dangerous recreational activities are less attractive, while appreciative and passive outdoor recreational activities are more attractive. He predicts that facility-based (skating, skiing, swimming in pools), snow-based recreation (skiing, sledding), and recreational sports (waterskiing, climbing) will decline in participation.

Conversely, participation in bird watching, pleasure walking, pleasure driving, and sightseeing will increase (Foot 1990). Ecotourism will benefit the most from the demographic changes. Ecotourism is attractive to older citizens and is well designed to handle their needs. Older people are not willing or able to be involved in strenuous and dangerous activities to the same extent as younger people; therefore, both wilderness travel and adventure travel will see decreased demand. For car camping, if increases in services levels designed specifically for the senior market and changes in accommodations are undertaken, the older person demand can be captured.

The Sage Group (1993) and Tourism Research Group (1990) report that "...the environment is a high priority with people of all ages, worldwide." With adults over the age of 65 in Canada, the top three travel interests are history and culture (85 percent), environment (82 percent), and outdoors (70 percent). For a similar U.S. population, the highest levels of travel interest are history and culture (100 percent), environment (95 percent), and outdoors (75 percent). Older Germans say that outstanding scenery is the number one factor influencing their choice of overseas vacation destinations. In a different survey approach, older Japanese reported that nature and environment are the top reasons for visiting Canada. Older people in France and Britain reported that Canada was high on their list of potential destinations because of national parks, outstanding scenery, and interesting wildlife. Clearly, the older adult nature travel market is large, and the associated tourism market may be underdeveloped. Tourism Canada is moving aggressively to help Canada take advantage of the older traveler market for learning about nature (Randolph Group 1994).

Because of the relative newness and rapid growth of ecotourism, many management issues need attention (Moore and Carter 1993). In North America, Australia, and New Zealand, the ecotourism management institutions are the most sophisticated in the world and can handle the changes required for the increasing activity levels. For example, Muir and Chester (1993) outline the complicated management issues surrounding tourism use of a seabird nesting island in the Great Barrier Reef Marine Park. In much of the world, however, and especially in developing countries, management institutions are immature and have limited capability to undertake the management necessary for tourism to exist at sustainable levels (Fennell and Eagles 1989). Limits of acceptable use must be developed and implemented at all sustainable tourism destinations to avoid unacceptable levels of ecological and social change. Personnel training in both the private and public sectors is vital. Large numbers of sophisticated ecoconsumers are descending upon some ecodestinations that are not capable of delivering the expected services. The long-term economic sustainability of ecotourism is essential, and a major international effort is needed to help developing countries build their management and fiscal institutions.

Use-level limitations on the size of wilderness areas and on finding acceptable new reserves produce a finite and low-market capacity. In North America, wilderness supply and demand factors are well developed. There may be more demand than available supply in the United States, but Canada is well primed to accept the overflow. There may

be a modest development of demand from Northern Europe, especially from Germany. The biggest management issue in wilderness areas will be allocation of access. Because of government funding limitations, management institutions will be challenged to consider using financial allocation criteria, as opposed to the predominant approach of using first-come first-serve (Eagles 1994).

Adventure tourism is expanding around the world as new destinations are introduced each year. However, this group is facing an assault from other tourist groups and from the environmental lobby. Widespread garbage, damage to sensitive high-altitude environments, and intergroup conflicts are three of the issues causing the development of restrictions, and more restrictions will occur. Liability concerns are already limiting some dangerous activities, and more limitations are likely as fewer public or private institutions are willing to accept the responsibility of participant safety. If adventure tourism is to increase, it must prevent environmental destruction. Acceptable levels of impact must be determined and adhered to, or social and ecological impacts will continue to rise.

Car camping is faced with an aging population in North America and in Europe. This market has changing needs, demanding changes in destinations and services. For example, aging campers will start to drop out of the camping market as more comfort (such as roofed accommodation in parks), and more simplicity in travel administration is demanded. The desire to have contact with nature increases with age, but age also causes limitations. Most public parks are poorly equipped to take advantage of the increased demand for educational travel (Sage Group 1993). A strategic alignment of parks, private tourist companies, and colleges could better satisfy this demand.

Conclusions

More research should be undertaken on the activities and enduring involvement of the four niche markets. An understanding of the conflict and agreement points among the four markets is necessary for planning and management. A better understanding of the uniqueness and of the overlap of the niche markets would be useful.

The sustainable tourism market is now large enough that niche specialization should be recognized and incorporated into planning and management. Tourism managers will find it useful to treat each market with a specific set of policies. Higher levels of environmental protection and higher levels of satisfaction will occur when the supply and demand elements of this industry are better coordinated.

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Understanding Nature-Based Tourists: Using Psychographics

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Abstract—In identifying market segments and profiling tourists' characteristics, about 400 tourists' responses on a survey delineated their environmental attitudes, trip, and demographic characteristics. Six benefits nature-based tourists seek were education/history, camping/tenting, socializing, relaxation, viewing nature, and economy. Tourists appear to seek a package of these benefits. Tourism marketers could predict what tourists seek and gear programs around those desired tourism experiences.

Nature-based tourists represent a recent phenomenon in the tourism market. Nature-based tourism is big business, providing substantial economic rewards for a multitude of destinations (Berle 1990). Nature-based tourists spend \$14 billion annually viewing wildlife, photographing, and traveling to see nature (Vickerman 1988).

Nature-based tourists are often discussed as a homogeneous subset of tourists. Valentine (1993) points out, however, that several types of nature-based tourists exist and that nature-based tourists tend to vary their travel behaviors and the experience desired. Tourism planners must be cognizant of the benefits that nature-based tourists seek to be more effective in marketing and providing services.

Dube (1993) states, "It is becoming obvious that there is an urgent need for a well-defined analytical framework to help decisionmakers and researchers understand and deal with the issues of nature-based tourism." The need for research stems from the concept of adventure travel, with its current broad meaning, which has led to products and services offered through diverse activities and to a variety of tourism markets (Dube 1993). Furthermore, greater attention is being paid to both cultural and economic impacts of nature-based tourism destinations. But despite the growing interest, nature-based tourism research still appears to be in its infancy.

A highly complex relationship exists between the tourism industry and the natural environment (Pearce 1985), and leisure resource managers face the growing challenge of equilibrium between preservation of the resource and providing preferred quality leisure experiences (Dunn

1980). Uysal and others (1992) suggest that this balance is largely a function of individuals' expectations, preferences, and attitudes toward the environment and the actions of the resource management agency.

Recent research in nature-based tourism or ecotourism has begun to examine the travel motives and attitudes of nature-based tourists. Most recently, Eagles (1992) compared the profile of the ecotourist with that of the "general" traveler in terms of activity preferences, destination preferences, and accommodation preferences.

Tourism markets have been segmented by use of demographic, geographic, and consumer characteristics. Based on earlier work in marketing and advertising (Peterson 1972; Wells 1975; Wells and Tigert 1971; Ziff 1971), the tourism industry has recently described its market segments by psychological, social, and activities criteria, more commonly known as psychographics. Psychographics offer a way of describing consumers, charting new trends, and continuing the further development of consumer typologies (Wells 1975).

Research has shown that psychographic scales can be used in the classification of vacation lifestyles (Perrault and others 1977). However, few empirical psychographic studies have been reported in the published tourism research. Those that have examined questions related to lifestyle profiles of nature-based tourists have tried to answer questions about travelers to specific states (Schewe and Calantone 1978), National Parks (Mayo 1975), and state park inns (Gladwell 1990). However, little has been done using psychographic Activity, Interest, and Opinion scales to segment nature-based travelers.

Our research identifies market segments and profiles delineated clusters/segments on their environmental attitudes, trip and demographic characteristics. Our main research questions were: (1) Can nature-based tourists be segmented according to their nature-based psychographic profiles? (2) Do environmental attitudes, trip and demographic characteristics discriminate between the resulting clusters?

Methodology

Sample

The study sample was randomly selected from a commercial mailing list that identified individuals who travel frequently, have an interest in the environment, and may or may not have an interest in photography. We contacted 1,200 individuals in North Carolina, South Carolina, and

In: McCool, Stephen F.; Watson, Alan E., comps. 1995. Linking tourism, the environment, and sustainability—topical volume of compiled papers from a special session of the annual meeting of the National Recreation and Park Association; 1994 October 12-14; Minneapolis, MN. Gen. Tech. Rep. INT-GTR-323. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station.

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Georgia, with 400 contacts in each state. We used a modified Dillman (1978) total design method to collect the data. The response rate was 36 percent ($N = 334$). To determine whether the low response rate biased the results, we compared nonrespondents to respondents in terms of age, gender, and income, and no significant differences were found. Hence, we judged the sample to represent the population of interest, at least on the independent variables.

Instrument

The data used in this study were part of an exploratory consumer behavior study of nature-based tourists. To assess the activities, interests, and opinions of respondents, 46 Activity, Interest, and Opinion items were used. These 46 statements mirrored the statements used by Perrault and others (1977). We used a 5-point Likert-type scale response format (1 = strongly disagree to 5 = strongly agree). In addition, an individual's attitudes toward the environment were assessed using the New Environmental Paradigm scale developed by Dunlap and Van Liere (1978). This scale consists of 12 items designed to measure individuals' attitudes toward the environment based on their beliefs leading to either an anthropocentric or ecocentric environmental orientation. We also used a 5-point Likert-type scale response format (1 = strongly disagree to 5 = strongly agree) with this scale. The other sections of the survey asked questions related to individuals' trip purpose, specific trip behaviors, and demographics.

Analysis

Data analysis was accomplished using a three-step procedure: (1) factor analyses of the 46 Activity, Interest, and Opinion items and the 12-item New Environmental

Paradigm scale; (2) cluster analysis of respondents on the factor grouping resulting from the factor analysis of the Activity, Interest, and Opinion groupings; (3) discriminant analysis using environmental attitudes, likelihood of taking another nature-based trip, total number of nature-based trips taken, involvement in other nature-based activities, age, and level of education as predictor variables, and the clusters as class variables.

Results

Respondents tended to be male, middle to older aged with at least some college education. Nature-based travelers tended to be white, but this may be due to the sample and not representative of the general population. Nature-based travelers appear to come from primarily white-collar occupations or are retired and have incomes of \$50,000 or above. Figure 1 gives a breakdown of the self-reported activities of respondents while on their nature-based trip

We performed principal components factor analysis using a varimax rotation to reduce the 46 Activity, Interest, and Opinion items into specific dimensions. After the initial factor analysis, we reduced the 46 original items to 38. The eight items were dropped due to their inappropriateness in the current study. Six factors emerged, exhibiting the best simple factor structure. Items were dropped because they failed to load on any factor at the 0.30 level or higher. These six dimensions used in subsequent analysis explained 47 percent of the variance. In addition, reliability analysis was performed on each of the six dimensions with resulting Cronbach's Alpha coefficients ranging from 0.87 to 0.61, based on the items included in each dimension. Factor scores on each dimension were used in subsequent analysis. The dimensions of benefits sought

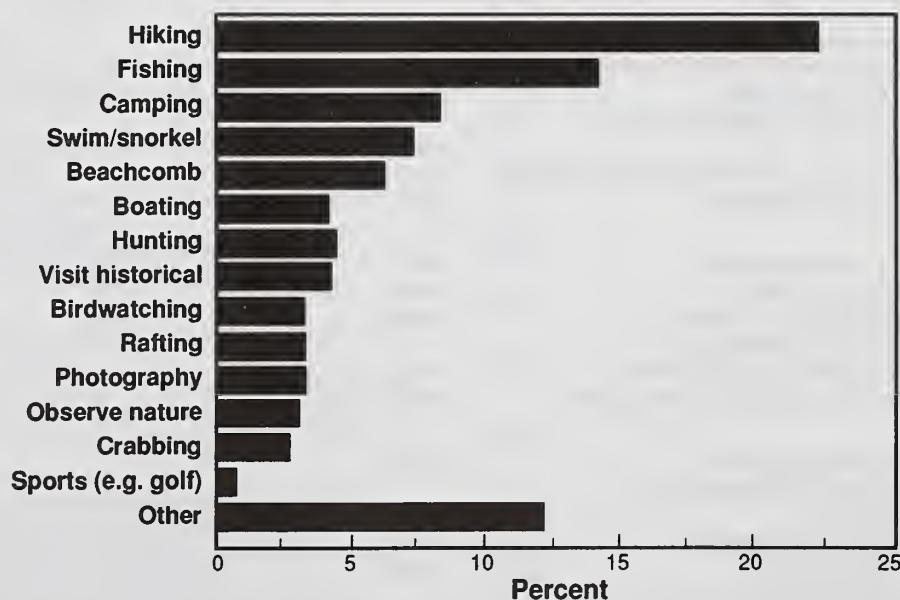


Figure 1—Self-identified nature-based activities and their rates of participation.

were labeled: education/history, camping/tenting, socializing, relaxation, viewing nature, and economy (table 1).

Cluster analysis, using Ward's method, was then performed on the Activity, Interest, and Opinion items to delineate individuals based on a package of benefits they seek through their nature-based activities. Four clusters,

explaining 48 percent of the variance, were selected using the CCC statistic for further analysis. Figure 2 shows the breakdown of the four clusters and benefits sought by each grouping.

We used similar procedures to examine the dimensionality of the 12-item New Environmental Paradigm scale.

Table 1—Factor analysis of activities, interest, and opinion items.

Subscales	Factor loading	Eigen value	Variance explained	Reliability coefficient
			Percent	
Education/history		3.54	9.1	0.820
Prefer knowledgeable vacation activities	0.7644			
Enjoy travel to historical location	.6694			
Educational vacations are most fun	.6413			
Take side trips to historical locations	.6310			
I learn on vacation	.5542			
Vacations should be educational	.5175			
On vacation I learn about others	.4599			
I enjoy going on guided tours	.4531			
Camping/tenting		3.53	9.0	.873
I prefer to camp on vacation	.8556			
I usually camp on vacation	.8336			
My family enjoys camping	.8051			
Hotels/motels are not as enjoyable as a camping vehicle in a camping site	.7765			
I vacation in a tent because it is more economical	.5587			
Socializing		3.51	9.0	.739
Social interaction is important	.7470			
I travel for companionship	.7273			
Vacations are a chance to develop close relationships	.6727			
Most important is meeting new people	.6689			
I prefer vacations with others in groups	.6187			
Selection of a vacation site which will impress my friends is important	.4054			
I'd rather travel to meet new people	.3657			
When traveling I seek thrills and adventure	.3634			
Relaxation		3.34	8.6	.767
Most important is to relieve stress and strain of normal life	.7732			
Vacations should not be hectic, but quiet and relaxing	.7604			
I prefer vacations that help me relax	.7490			
On vacation I look forward to relieving stress and feeling renewed	.6829			
If I can't completely relax, I don't feel I've been on vacation	.6139			
I prefer shorter trips due to expenses	.3407			
Viewing nature		2.47	6.3	.684
I take time to enjoy nature on vacation	.5807			
Areas I visit are usually beautiful	.5546			
I am aware of pretty scenery on vacation	.4792			
I appreciate design and natural beauty of vacation sites more than the average tourist	.4402			
I think I have more self confidence than most people	.4258			
Economy		2.06	5.3	.608
I shop around for best buy vacations	.5713			
I secure numerous travel brochures prior to making vacation plans	.5188			
I'd rather take a trip than stay at home	.5160			
I enjoy traveling away from home	.4855			
I always have a well defined route and maps of my destination prior to leaving on vacation	.4669			
I take photos of beautiful sites rather than historical ones	.3400			
Total			47.3	

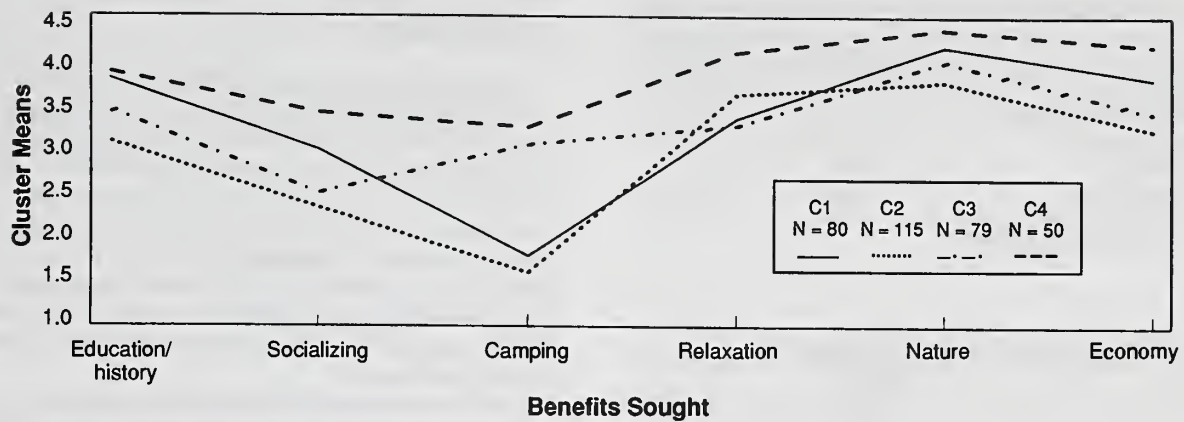


Figure 2—Results of cluster analysis and segments identified.

Two factors, explaining 89 percent of the variance, emerged. We judged both dimensions on the item loadings and labeled the first factor “conservationist environmental attitude” and the second, “consumptive environmental attitude” (table 2).

Finally, we performed the discriminant analysis using the previously mentioned demographic and trip characteristic variables as predictor variables, with the clusters as the class variable. Results of this analysis revealed two significant functions (function 1: Wilks’s Lambda = 0.78, $F = 3.25$, $p = 0.001$; function 2: Wilks’s Lambda = 0.91, $F = 1.67$, $p = 0.02$), explaining 92 percent of the variance. Proper classification was achieved in 46 percent of the cases (table 3).

Inspection of the group centroids for function 1 revealed a definite delineation between two sets of clusters (table 4). The difference between these sets was determined to be a function of the camping benefits sought by each. Subsequently, the two sets were described as “campers” and “non-campers.” The standardized structure coefficients revealed six variables (likelihood of taking a nature-based trip, age, level of education, consumptive attitude, conservationist attitude, and involvement in other nature-based activities) as potential predictors. It appears that noncampers are more likely to take another nature-based trip, be older, higher educated, and more likely to have a consumptive attitude. Campers tended to be more likely to have a conservationist attitude and have higher involvement in other nature-based activities.

Table 2—Factor analysis for environmental attitude items.

Subscales	Factor loading	Eigen value	Variance explained	Reliability coefficient
			Percent	
Conservationists		3.27	40.8	0.82
The balance of nature is delicate and easily upset	0.7636			
The earth is like a spaceship with only limited room and resources	.7575			
There are limits to growth beyond which our industrialized society can't exist	.7275			
When humans interfere with nature it often produces disastrous consequences	.6917			
Mankind is severely abusing the environment	.6300			
Humans must live in harmony with nature in order to survive	.6240			
We are approaching the limit of the number of people the world can support	.6043			
To maintain a healthy economy, we will have to develop a “steady state” economy where industrial growth is controlled	.4568			
Consumptives		2.07	51.8	.70
Plants and animals exist primarily to be used by humans	.7923			
Humans need not adapt to the environment because they can remake it to suit their needs	.7377			
Mankind was created to rule over the rest of nature	.6969			
Humans have the right to modify the natural environment to suit their needs	.6663			
Total			91.9	

Table 3—Results of discriminant analysis for predictor variables.

	Function 1	Function 2
Eigen value	0.17	0.07
Percent variance explained	.65	.27
Canonical correlation	.38	.25
Wilk's Lambda	.78	.91
Level of significance	.0001	.0073

Note: 46 percent correctly classified

Table 4—Discriminant analysis results: function 1.

Centroid	Cluster
C2	0.39
C1	.18
C3	-.26
C4	-.77

Predictors	Structure coefficient
Likely to take another nature-based trip	0.74
Age	.50
Education	.38
Consumptive attitude	.36
Conservationist attitude	.42
Involvement in other nature-based activities	.71

Group centroids in function 2 also showed a delineation between two sets of clusters, but description of these two sets was more difficult (table 5). The distinction made between these groups was between low "social campers" and high "social campers." Standardized structure coefficients for this function revealed four potential predictor variables: education, consumptive attitude, age, and likelihood of taking another nature-based trip. It appears that respondents who were more highly educated were more likely to be campers who were not looking for social benefits in their camping experience, while older respondents and those more likely to take another nature-based trip were also more likely to be campers who were seeking more social experiences along with their camping experiences. It is important to note, however, that all of these differences between the two significant functions may also be a result of other variables not included in this analysis and thus is a limitation of the study.

Table 5—Discriminant analysis results: function 2.

Cluster	Centroid
C3	0.39
C1	.07
C4	-.02
C2	-.16

Predictors	Structure coefficient
Education	0.78
Consumptive attitude	.34
Age	-.32
Likely to take another nature-based trip	-.50

Discussion

We attempted to describe different groups of nature-based tourists and to determine if differences between the groups exist. Based on the results of this study, tourism marketers and researchers can start to look at ways to segment nature-based tourists based on their psychographic profiles. Communities can potentially choose which types of tourists to attract and subsequently develop a tourism product that will be attractive to their chosen target markets. As nature-based tourism continues to grow, it appears to be a viable market for most rural destinations to foster economic development.

This research suggests that at least six benefit dimensions of nature-based tourism may exist (table 1). In addition, it appears that nature-based travelers are looking for a package of benefits in their nature-based activities. Finally, it may also be viable for tourism marketers to predict which benefits or package of benefits travelers seek, based on specific demographic and trip characteristics of individuals.

For communities to develop a sustainable nature-based tourism industry, it is important for them to be aware of the differences among nature-based tourists. Although nature-based activities were important to tourists, socializing experiences were more important to one segment of the visitors. For example, it is important to know that a segment of nature-based tourists desire condominiums, and not campgrounds, as their lodging type.

We suggest that future research may want to examine the extent of social, cultural, and environmental impacts that groups of nature-based tourists have on local communities.

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Characteristics and Environmental Attitudes of Coral Reef Divers in the Florida Keys

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Joseph D. Teaff

Abstract—Increase in the number of divers and deterioration of many coral reefs have drawn attention to diver impacts on coral reefs. This 11-day study was designed to determine whether relationships exist among coral reef divers' demographic characteristics, diver specific characteristics, sports diving activity, sports diving trips, reasons for diving, knowledge of coral reef ecology, and attitudes toward the environment. The two study sites were in the Florida Keys National Marine Sanctuary (Key Largo and Key West). Coral reef divers who desire to learn about and be a part of the coral reef environment tend to be concerned with the negative impacts persons are having on the natural environment.

Scuba diving is one of the fastest growing forms of recreation in the United States. Safer, less expensive diving equipment, combined with increased amounts of leisure time and disposable income, have made it easier than ever to participate (Ward 1990). In 1991, there were 4 million divers in the United States. The world total is expected to be 14 million by the end of the decade (Fishman 1991). John Pennekamp Coral Reef State Park in the Florida Keys National Marine Sanctuary alone accommodates nearly 2 million visitors a year, many of whom are divers (Ward 1990).

Worldwide demands for prime dive locations are also increasing due to the growth of the hospitality and travel industries. Now, places once available only to wealthy divers are becoming accessible to many more people (Fishman 1991). Locations such as the Great Barrier Reef, Belize, and the Florida Keys have become especially popular among divers because of their coral reefs.

Diver-related damage to coral was not a problem before coral reef diving became popular. However, with the increase in the number of divers, demand for coral reef destinations has out-paced supply. As a result, many coral reefs are deteriorating from overuse and, in some cases, abuse. Common diver impacting behaviors include fish feeding, standing on coral, stealing of coral, stirring of bottom sediment by excessive finning, and breaking and bumping due to improper buoyancy control (Tilmant 1987). Tagle (1989) identified the most common reasons for diver impact with coral reefs: inadequate buoyancy

compensation skills, inexperience and lack of practice, lack of awareness of impacts (usually with fins), and activities such as underwater photography or exploration.

Since the mid-1980's, education has been a means of reducing diver impacts on coral reefs. Many dive organizations now include marine education as part of their certification and training programs. An example is the Professional Association of Dive Instructors (PADI), a major certifying agency that has created the Project A.W.A.R.E. Foundation. This foundation encourages and supports projects that will enrich awareness and understanding of the fragile nature of the aquatic world. Furthermore, most dive operators give a brief lecture to their customers about the fragility of coral reefs. The operators work with resource managers in enforcing regulations regarding divers and the protection of coral reefs (Ward 1990). Resource managers in the Florida Keys have created educational and interpretive programs for coral reefs. A better understanding of the characteristics of the coral reef diving population, knowledge of reef ecology, and environmental dispositions of divers at coral reef destinations should enhance the effectiveness of programs (B. Causey and J. R. Clark, personal communication, 1992).

Environmental dispositions of divers at coral reef destinations need to be studied to gain a better understanding of how divers relate to the everyday physical environment. Dispositions that appear to be most applicable include concerns about the negative impacts persons are having on the natural environment, termed "pastoralism;" concerns that the preferred environment be modified to suit the needs and wants of humans, termed "environmental adaptation;" and dispositions toward competence and comfortableness in the natural environment, termed "environmental trust" (McKechnie 1971).

Purpose and Research Questions

Our purpose was to determine whether relationships exist between coral reef divers' demographic characteristics (gender, marital status, age, education, household income), diver specific characteristics (scuba certification level, years as a scuba diver), sport diving activity (number of dives completed in the last year), sport diving trips (number of diving trips at geographic locations in the last year), reasons for diving (perceived benefits of diving), knowledge of coral reef ecology, and attitudes toward the environment (pastoralism, environmental adaptation, and environmental trust). Our research questions:

1. Are there statistically significant relationships between coral reef divers' demographic characteristics, diver

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specific characteristics, sport diving activity, sport diving trips, reasons for diving, knowledge of coral reef ecology, and pastoralism?

2. Are there statistically significant relationships between coral reef divers' demographic characteristics, diver specific characteristics, sport diving activity, sport diving trips, reasons for diving, knowledge of coral reef ecology, and environmental adaptation?

3. Are there statistically significant relationships between coral reef divers' demographic characteristics, diver specific characteristics, sport diving activity, sport diving trips, reasons for diving, knowledge of coral reef ecology, and environmental trust?

Methods

The Florida Keys, an island chain in southern Florida, are composed of coral and limestone and stretch approximately 150 miles into the Gulf of Mexico. The islands form the boundary for Florida Bay as they curve southwesterly around the tip of the Florida Peninsula from Virginia Key and from just south of Miami Beach to Key West. Key Largo is the largest Key (approximately 30 miles long) and is just southeast of the Florida Peninsula where the Keys begin.

The two major industries in the Florida Keys are tourism and commercial fishing. These industries are supported by the reef tract that runs parallel with the Keys to the east. Diving, snorkeling, and sports fishing are among the activities that draw more than 2 million tourists a year to the Florida Keys. The commercial fishing industry that the reef supports is valued at \$60 million (the New Encyclopedia Britannica 1985).

The two marine sanctuaries—Key Largo created in 1975 and Looe Key National Marine Sanctuary created in 1981—were created to protect specific areas of North America's largest barrier reef. These sanctuaries were successful at preserving coral reefs. However, to provide a more holistic approach to preserving reefs, Congress in 1990 enacted and passed into law the Florida Keys Marine Sanctuary and Protection Act. This Act allowed creation of the New Florida Keys Marine Sanctuary, which encompasses nearly all of the Keys (2,600 square miles), including both of the original sanctuaries of Key Largo and Looe Key.

We chose Key Largo and Key West as survey sites because they represent two dive sites in the Florida Keys that receive large numbers of divers. Key Largo National Marine Sanctuary is just a few hours drive from mainland Florida and Miami. Key West is at the far end of the island chain.

We estimated that 660 subjects could be drawn from two dive operations in Key Largo and Key West over an 11-day period. From May 21 through May 26, 1993, subjects were to be drawn from dive boats operated by Atlantis Dive Shop in Key Largo. Atlantis Dive Shop operates four dive boats, each making two daily trips to the reef. The morning trip departs at 8:30 and the afternoon trip at 12:30. Each boat carries approximately 30 divers per trip. One dive boat per day, from Atlantis Dive Shop, would be randomly chosen to survey 60 subjects each day over 6 days

for a total of 360 subjects. Similarly, from May 27 through May 31, 1993, subjects were to be drawn from dive boats operated by Key West Pro Dive in Key West. Key West Pro Dive's trip schedule is similar to that of Atlantis Dive Shop except that Key West Pro Dive operates two dive boats rather than four. We estimated that if one dive boat per day were randomly chosen to survey 60 subjects each day over a 5-day period, that 300 subjects could be surveyed. Combined with the 360 subjects drawn from Key Largo, there would be 660 subjects.

Unfortunately, due to high seas at Key Largo and Key West, during the period of the survey, many trips were canceled or the group size greatly reduced. Therefore, only 152 subjects were drawn from Key Largo and 71 subjects from Key West for a total of 223 subjects.

We used two questionnaires. One concerned diver characteristics (demographics, diving activity, diving trips, benefits of diving, and diver knowledge of coral reef ecology). The second was the Environmental Response Inventory (McKechnie 1971), which measures environmental dispositions.

To gather information on diver characteristics, we adapted the questionnaire used by Vrana (1992) in "The Sports Diving and Great Lakes Aquatic Parks Survey." The demographic items (gender, marital status, age, education, household income, certification level, certifying organization, and years as a diver) were duplicated without modification. The items measuring diving activity, diving trips, and benefits of diving required modifications to conform to differences in survey location (Great Lakes versus Florida Keys) and slight differences in survey purposes.

We developed the section "Diver Knowledge of Coral Reef Ecology," to measure divers' knowledge of coral reef ecology, diver impact on coral reefs, and recent efforts to reduce diver impact on coral reefs. We derived the questions from literature concerning coral reef ecology and human impacts on coral reefs, information we gathered at various diving locations, and from seminars concerning coral reefs.

We chose McKechnie's (1971) Environmental Response Inventory for our study because it measures environmental dispositions—that is, individual differences in the ways people think about and relate to their physical environment. The Environmental Response Inventory is subtle, nonthreatening, and effective when subjects' reactions are predictable. Our research included only the subscales of pastoralism, environmental adaptation, and environmental trust from McKechnie (1971), as follows:

1. *Pastoralism*: Measures attitudes about, for example, opposition to land development; population growth; preservation of natural resources, including open space; acceptance of natural forces as shapers of human life, such as open spaces; sensitivity to pure environmental experiences; and self-sufficiency in the natural environment. Divers that score high on this subscale tend to be concerned with the negative impacts persons have on the natural environment.

2. *Environmental adaptation*: Measures attitudes about, for example, modification of the environment to satisfy needs and desires and to provide comfort and leisure; opposition to government control over private land

use; preference for highly designed or adapted environments; use of technology to solve environmental problems; and preference for stylized environmental details. Divers that score high on this subscale tend to prefer environments modified to suit the needs and wants of humans.

3. *Environmental trust*: Measures attitudes about, for example, general environmental openness and responsiveness; competence in finding one's way about the environment versus fear of potentially dangerous environments; security of home; and fear of being alone and unprotected. Divers that score high on this subscale tend to be more competent and comfortable in the natural environment.

Prior to vessel departure on each day, the researchers provided orientation and instructions to staff members concerning the research. After departure from the marina and following the dive master's safety briefing, the dive captain explained the questionnaire and its importance and requested that the divers complete the questionnaire while in transit to the dive site (approximately a 20 to 30 minute ride). To determine relationships between diver-specific characteristics and environmental dispositions, the information gathered was correlated with the Environmental Response Inventory dependent variables using a Pearson correlation coefficient and a step-wise, multiple regression analysis.

Results

Of the 223 respondents, the majority of the divers were male (62.3 percent), single (50.7 percent), with 41.3 percent being married and 8.1 percent being divorced, separated, or widowed. Almost all the divers surveyed were in the age range 15 to 59 (98.2 percent), with the majority being in the 15 to 36 age range (67.7 percent). Almost all the divers surveyed had at least a high school diploma (96 percent). Over half of the divers had a 4-year college degree or more education (53.3 percent) and had incomes above \$30,000 (72.5 percent).

The majority of the divers (68.6 percent) had 3 years or less diving experience. Almost half (49.3 percent) of the divers were open-water certified, with advanced divers representing only 17.8 percent of those surveyed. Almost half (47.1 percent) of the divers were certified by the Professional Association of Diving Instructors (PADI), 24.6 percent were certified by other certifying groups, and 28.3 percent were not certified.

Concerning diving trips, the majority of the divers surveyed (51.4 percent) had made 10 trips or less in the previous year, with almost one-third (33.2 percent) of the divers not making a trip within the previous year. Almost half (49.2 percent) of the divers made 12 or less diving trips in the United States in the previous year, with 40.3 percent making between one and four trips. Of the divers surveyed, 44.4 percent had taken 12 or less diving trips to the Florida Keys in the previous year, with 38.6 percent of them making between one and four trips.

Concerning diving activity, the majority (53.8 percent) of the divers made less than 25 dives in the previous year. Over one-third (35.9 percent) had not made a dive in the previous year. Nearly half of the divers (45.7 percent) made 25 dives or less at a coral reef location in the year. Only 9.8 percent had made more than 25 dives at a coral reef location, and 41.7 percent had not made any dives at coral reef locations.

Table 1 presents data concerning divers' reasons for diving. Most of the divers (93.7 percent) chose "Enjoyment of underwater beauty and aesthetics" to be a "very important" or "crucial" reason for diving. Other reasons that drew high percentages of responses of "very important" or "crucial" were "Exciting experiences," "Escape from routine," "Exploration," "Learning about aquatic ecology," "Freedom of choice," "Development of reef diving skills," "Leisure time with family," "Feeling of independence," "Social interaction with friends," and "Physical fitness."

Table 2 presents data concerning divers' knowledge of coral reef ecology. Divers "strongly agree" or "agree" with the following: "Coral are fragile animals," "Divers have

Table 1—Reasons for diving by percentage of 223 respondents.

Reasons for diving	Not important	Slightly important	Very important	Percentage crucial
Development of reef diving skills	10.3	30.0	37.2	22.4
Learning about aquatic ecology	5.8	30.9	48.0	15.2
Social interaction with friends	13.0	34.1	42.6	10.3
Leisure time with family	14.3	20.2	50.2	15.2
Physical fitness	11.7	36.3	39.0	13.0
Exploration	3.1	27.4	53.8	15.7
Exciting experiences	2.7	14.3	61.0	22.0
Feeling of independence	13.9	30.9	36.8	18.4
Escape from routine	7.2	21.5	40.4	30.9
Freedom of choice	14.3	23.8	39.0	22.9
Risk-taking	44.8	32.7	12.1	10.3
Collection of shells or tropical fish	71.3	20.2	6.3	2.2
Collection of geological specimens	78.5	15.7	4.5	1.3
Enjoyment of underwater beauty and aesthetics	.9	5.4	35.0	58.7
Fantasize about being a part of the coral reef ecosystem	48.0	29.1	13.9	9.0

Table 2—Divers' knowledge of coral reef ecology, by percentage of 223 respondents.

Ecological statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Divers have impact on coral reefs	0.0	0.9	8.1	30.5	60.5
Mooring buoys have helped to protect coral reefs	.4	1.3	24.7	28.3	45.3
Taking a shell from near a coral reef harms the coral reef ecosystem	.4	6.3	13.5	36.3	43.5
Feeding fish harms the coral reef ecosystem	3.1	15.2	37.2	23.8	20.6
Physical impact with coral reefs while diving is unavoidable	23.8	42.6	14.3	13.9	5.4
Coral reef ecosystems are the rain forest of the sea	1.3	1.8	17.0	31.8	48.0
Coral are fragile animals	.4	.9	3.6	23.8	71.3
Coral reefs do not require a substantial amount of nutrients to thrive	35.4	28.7	22.0	9.9	4.0
Mangroves are essential to the existence of coral reefs	3.1	3.6	55.6	16.6	21.1
Coral reefs need sunshine to flourish	.4	3.1	25.1	40.8	30.5

impact on coral reefs," "Coral reef ecosystems are the rain forest of the sea," "Taking a shell from near a coral reef harms the coral reef ecosystem," and "Mooring buoys have helped to protect coral reefs." Divers "strongly disagree" or "disagree" with the following: "Physical impact with coral reefs while diving is unavoidable" and "Coral reefs do not require a substantial amount of nutrients to thrive."

Correlations

Table 3 shows the ranges, means, and standard deviations for the dependent variables pastoralism, environmental adaptation, and environmental trust. Table 4 contains the correlations between the independent variables and the dependent variables.

Table 4 shows that a number of independent variables from the demographics, reasons for diving, and knowledge of coral reef ecology correlated significantly with the dependent variable pastoralism. From the demographic characteristics, only one variable, gender, correlated with pastoralism, showing that female divers are more likely to support pastoralistic issues. The variables from the reasons for diving section that significantly correlated with pastoralism were "Development of reef diving skills," "Learning about aquatic ecology," "Physical fitness," "Exploration," "Exciting experiences," "Feeling of independence," "Enjoyment of underwater beauty and aesthetics," and "Fantasize about being a part of the coral reef ecosystem."

Four variables from the variable section knowledge of coral reef ecology that significantly correlated with pastoralism were "Mooring buoys have helped to protect coral reefs," "Feeding fish harms the coral reef ecosystem," "Mangroves are essential to the existence of coral reefs," and "Coral reefs need sunshine to flourish."

Table 4 shows that only four variables from the section of demographic characteristics, reasons for diving, and knowledge of coral reef ecology correlated significantly with the dependent variable environmental adaptation: "Age," "Learning about aquatic ecology," "Risk taking," and "Physical impact with coral reefs while diving is unavoidable."

Table 4 shows that five variables from the demographics, diving trip characteristics, diving activity characteristics, and reasons for diving correlated significantly with the dependent variable environmental trust: "Years as a diver," "Diving trips completed in the last 12 months," "Sport dives completed in the last 12 months," and "Development of reef diving skills."

Regressions

Tables 5, 6, and 7 present the results of the stepwise multiple regressions for each of the dependent variables. The stepwise multiple regression lists the independent variables in order of their significant relationships with the dependent variables. The tables for each of the multiple regressions used to answer each research question

Table 3—Ranges, means, and standard deviations for the dependent variables pastoralism, environmental adaptation, and environmental trust.

Dependent variables	Possible range	Sample range	Mean	Standard deviation
Pastoralism	22-110	49-105	79.92	10.90
Environmental adaptation	22-110	35-98	66.67	10.56
Environmental trust	20-100	35-92	66.15	9.77

Table 4—Correlations of independent and dependent variables.

Independent variables	Dependent variables		
	Pastoralism	Environmental adaptation	Environmental trust
Demographic characteristics			
Gender	−0.27**	0.10	0.09
Marital status	−.03	−.10	−.07
Age	−.04	−.17*	.02
Education	−.05	−.03	.11
Household income	−.07	.06	.07
Diver specific demographics			
Scuba certification	.04	.01	.13
Years as a diver	−.02	−.06	.15*
Diving trip characteristics			
Diving trips completed in the last 12 months	.10	−.05	.13*
Diving trips completed in the United States in the last 12 months	.08	−.03	.08
Diving trips completed in the Florida Keys in the last 12 months	.08	−.01	.13
Diving activity characteristics			
Sport dives completed in the last 12 months	.06	.01	.16*
Sport dives completed at coral reef destinations in the last 12 months	.06	.04	.16*
Reasons for diving			
Development of reef diving skills	.30**	−.07	−.01*
Learning about aquatic ecology	.40**	−.20**	−.02
Social Interaction with friends	−.04	.12	−.05
Leisure time with family	.08	.01	−.05
Physical fitness	.23**	−.08	−.12
Exploration	.16*	.04	.02
Exciting experiences	.13*	.03	.08
Feeling of independence	.15*	−.06	.05
Escape from routine	.03	.02	.04
Freedom of choice	.03	.05	.05
Risk-taking	.12	.13*	.13
Collection of shells or tropical fish	.04	.02	.03
Collection of geological specimens	−.02	.03	.03
Enjoyment of underwater beauty and aesthetics	.26**	−.09	.01
Fantasize about being a part of the coral reef ecosystem	.43**	−.12	.02
Knowledge of coral reef ecology			
Divers have impact on coral reefs	.11	.01	−.03
Mooring buoys have helped to protect coral reefs	.15*	−.01	.09
Taking a shell from near a coral reef harms the coral reef ecosystem	.09	−.10	−.04
Feeding fish harms the coral reef ecosystem	.17*	−.13	.11
Physical impact with coral reefs while diving is unavoidable	−.06	.19**	−.05
Coral reef ecosystems are the rain forest of the sea	.27**	−.05	.02
Coral are fragile animals	.12	.05	−.01
Coral reefs do not require a substantial amount of nutrients to thrive	−.09	.06	−.10
Mangroves are essential to the existence of coral reefs	.26**	.01	.07
Coral reefs need sunshine to flourish	.26**	−.13	.11

p<0.05*

p<0.01**

Table 5—Stepwise multiple regression for the dependent variable pastoralism.

Variables	r	rp	r ² change	F change	F change significance
Fantasize about being a part of the coral reef ecosystem	0.43**	—	0.19	50.71	<0.0001
Learning about aquatic ecology	.40**	.28	.25	37.04	<.0001
Coral reefs need sunshine to flourish	.26**	.26	.30	31.73	<.0001
Gender	-.27**	-.24	.34	28.30	<.0001
Mangroves are essential to the existence of coral reefs	.26**	.19	.37	25.01	<.0001
Coral reef ecosystems are the rain forest of the sea	.27**	.17	.39	22.37	<.0001
Physical fitness	.23**	.16	.40	20.26	<.0001
Freedom of choice	.03	-.16	.41	18.79	<.0001
Exciting experiences	.14*	.15	.42	17.60	<.0001
Certification	.04	-.14	.44	16.60	<.0001

p<0.05*

p<0.01**

Table 6—Stepwise multiple regression for the dependent variable environmental adaptation.

Variables	r	rp	r ² change	F change	F change significance
Learning about aquatic ecology	-0.20**	—	0.04	9.03	<0.0001
Physical impact with coral reefs while diving is unavoidable	.19**	-.19	.07	8.76	<.0001
Age	-.17*	-.18	.10	8.30	<.0001
Income	.06	.14	.12	7.49	<.0001
Certification	.01	.13	.14	6.86	<.0001
Taking a shell from near a coral reef harms the coral reef ecosystem	-.10	-.14	.15	6.58	<.0001
Social interactions with friends	.12	.15	.17	6.48	<.0001

p<0.05*

p<0.01**

Table 7—Stepwise multiple regression for the dependent variable environmental trust.

Variables	r	rp	r ² change	F change	F change significance
Sport dives completed at coral reef destinations in the last 12 months	0.16*	—	0.03	5.69	<0.0179
Risk taking	.13	.15	.05	5.56	<.0044
Physical fitness	-.12	-.17	.07	5.85	<.0007

p<0.05*

p<0.01**

are titled with the dependent variables for which the multiple regression analysis was performed.

Ten independent variables accounted for 44 percent of the variance in the regression entitled pastoralism (table 5). The variable "Fantasize about being a part of the coral reef ecosystem" accounted for 19 percent, while "Learning about aquatic ecology" accounted for 6 percent.

Seven independent variables accounted for 17 percent of the total variance in the regression environmental

adaptation (table 4). The variables that accounted for the majority of the variance in this regression were "Learning about aquatic ecology," "Physical impact with coral reefs while diving is unavoidable," and "Age."

Three independent variables accounted for 7 percent of the total variance in the regression environmental trust (table 5). The variable "Sport dives completed at coral reef destinations in the last 12 months" accounted for the largest percentage, 3 percent.

Discussion

Submerging in a fragile and generally untouched ecosystem, such as the coral reef ecosystem, apparently has an emotional appeal to divers. One immerses into the beauty and diversity of the coral reef ecosystem, becoming a part of the ecosystem and therefore in touch emotionally. To heighten the emotional experience, it may be useful for dive operators and program managers to create programs that include learning about coral reef ecology. Our study suggests that many divers in the Florida Keys are interested in such programs. An example is a fish identification class available through Atlantis Dive Shop in Key Largo, Florida. The program provides divers with an exciting, nonroutine diving experience, and allows them to enjoy the undersea environment while learning to identify fish species and coral.

Our study results may be useful in gaining compliance with rules and regulations governing the recreational use of coral reefs. The assumption is that divers who have a pastoralist disposition toward the environment will be more concerned with preservation of the natural environment and more supportive and understanding of rules and regulations.

Our findings also suggest that diving could be useful in education. A better understanding of the aquatic world will enable us to better understand the link between the sea and our existence. Ocean ecology needs to gain a priority in general education.

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United States Travel Abroad 1979 to 1991: Generational Trends Impacting the Sustainability of the United States Travel Market

Rodney B. Warnick

Abstract—This microanalysis of the impacts of age on the future of the travel industry reviews age categories, generations, and generational cycles in travel participation. By tracking a generation through both its own life cycles and influences from other generations and from current events (such as world political unrest), patterns emerge that may predict U.S. citizens foreign travel. Attitudes, education, and interests will determine future of ecotourism and environmental impacts of tourists.

Until 1990, according to U.S. Travel Data Center statistics, more Americans were still traveling abroad than there were foreigners coming into the United States. The future and sustainability of international travel depends on the size of its markets. One of the largest sources of travel abroad is the U.S. market. Is it important to understand the size of the U.S. market, how frequently U.S. citizens will visit other countries, and who within the U.S. population will travel outside of the country. As more countries prepare for global expansion in the travel industry in the coming decades, the market dynamics within the U.S. market will be important. If foreign countries are to make tourism a sustainable, viable industry, they must understand the changes in the U.S. travel market. If there are indications that the U.S. market will grow in the future and that more U.S. citizens will travel more frequently, then it is likely tourism development will intensify. Many countries are anticipating a growth in the number of American travelers going abroad (Nasbitt 1993). But the question of whether Americans will travel abroad more in the future still remains. Likewise, it will be important to determine who within the U.S. population will likely travel. Will the U.S. travel abroad market demand grow to the point where developing countries will invest more money in a tourism-based infrastructure? Will the market grow fast enough? When are the changes in the U.S. market for travel abroad likely to occur? Will the growth be such that tourism will be a viable and sustainable industry for foreign nations?

A number of indications show that the future of the travel industry looks bright. The demographics of an older

population with more free time may prime the travel industry for substantial growth (Nasbitt 1993). These changes in the demographics of the U.S. population will shape the future of travel (Ritchie 1992; Warnick 1993). We can examine future generations, their current and historical travel abroad participation patterns, and their volume of travel. To understand if tourism will be sustainable in future economies, a review of the travel patterns of current generations was undertaken.

Related Literature

Travel Industry's Need to Study Generational Travel

Strauss and Howe (1991) and Warnick (1993) indicate that there is a need to conduct a thorough microanalysis of the impacts of age on the future of the travel industry. Age-related trends over time can map out the probable routes and landmarks the travel industry will experience. A review of age categories, generations, and generational cycles in travel participation will reveal patterns for predicting the future and the sustainability of the travel markets.

Little has been done to examine the future of travel abroad by Americans. What will happen as Baby Boomers age? Will they increase their travel abroad? Will the U.S. retirement population travel abroad more frequently? Have any segments of travelers reduced their travel abroad due to recent global unrest and terrorism? The answers lie in understanding how generations evolve. Strauss and Howe (1991) indicate that each generation carries its own personality, and changes within a generation occur according to predictable cycles. Understanding these cycles and their generational characteristics, and tracking the generation through the processes of aging is an improved way to predict consumer trends. This process was used recently to examine domestic travel trends in the United States (Warnick 1993) and may provide additional insights into travel abroad trends.

The travel industry has largely focused upon macrotrend reporting. The U.S. Travel Data Center examines the counts and frequency of travel abroad on a regular basis. However, no examination of generational aging and its impact upon travel abroad has been completed. The process of generational aging seems so obvious that one would think every agency or industry would be examining these trends. Researchers (Murdock and others 1990, 1991;

In: McCool, Stephen F.; Watson, Alan E., comps. 1995. Linking tourism, the environment, and sustainability—topical volume of compiled papers from a special session of the annual meeting of the National Recreation and Park Association; 1994 October 12-14; Minneapolis, MN. Gen. Tech. Rep. INT-GTR-323. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station.

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Warnick 1993) have indicated that the knowledge of the effects of demographic characteristics, such as aging, and total population change, are useful in predicting recreational and travel trends. Dwyer (1994) indicated that the major challenge for predicting change is the limited information available on trends in recreation, leisure, and travel. Therefore, one would assume that similar studies of travel abroad would provide insights into the future.

Measuring Change by Generations and Age Cohorts

People who measure and track trends usually focus only on the individual age cohorts or groups (for example, 18- to 25-year-olds, 25- to 34-year-olds) rather than tracking the people or "generations" into progressively older age categories (Strauss and Howe 1991). But focusing exclusively on the constant age categories to determine the changes in travel behavior, attitudes, and interests causes the changes to appear random and complex. These static age categories are impacted by the generations that pass through them more than the stand-alone view of the age category. Each year a new birth-year group enters an age category and one exits. The problem of viewing age category changes alone is compounded when two generations occupy the same age cohort. Generations, usually measured in 25-year increments, will from time to time configure an age category entirely of the same generation. In addition, we will experience watershed years—the year when the last of a generation moves from one age category into the next. For example, the last of the Baby Boom generation (those born between 1946 and 1964) passed through the young age category of 18 to 24 into the age category of 25 to 34 and then were replaced with the Baby Bust generation (those born between 1965 and 1982). The watershed years were 1988 to 1989 for this event.

Strauss and Howe (1991) recommend reviewing the changes along a "generational diagonal" or continuum. Since 1620, nearly 18 generations have existed in the U.S., each roughly 20 to 25 birth years in length. Viewing America as a sequence of generational life cycles provides a new way to understand the social fabric of our society and how it may impact future travel.

In addition to the normal process of aging and passing through life's stages, each generation carries with it a "profile" that makes it different from the next. Strauss and Howe (1991) indicate that to understand how generations differ, we must understand what binds them together or what characterizes them as distinctively different. We then examine how they raised their children, what public events they witnessed in adolescence, and what social mission elders gave them as the generation came of age.

As the current "generation constellation" (Strauss and Howe 1991) moves through time, the character of the generation may change as the generation experiences epochal events, such as the Great Depression, World War II, the Vietnam War, and the Energy Crisis. These periods in history are called "social moments" and are defined as "an era, typically lasting about a decade, when people perceive that historical events are radically altering their social environment" (Strauss and Howe 1991, p. 71).

There are two types of social moments: (1) a "secular crisis" where "society focuses on reordering the outer world of institutions and public behavior," and (2) "spiritual awakenings" where "society focuses on changing the inner world of values and private behavior." The event that impacts each generation at a reference point in time is called an "age location." Just as history produces generations, so do generations produce history.

Each generation has its own unique age location relative to the types of social moments that occur, and each generation has a unique "phase-of-life" position before and after each type of social moment. Consequently, each generation develops its own unique peer personality. Table 1 provides an example of the generational diagonal and cycle movement in this century. Four generational personalities have been found to recur, in the same order, since 1620 (Strauss and Howe 1991, p. 30-31):

1. The Idealist Generation (Boom-type) grows up as indulged youth after a crisis, comes of age inspiring an awakening, fragments into narcissistic rising adults, cultivates principle as midlife moralizers, and emerges as visionary elders who congeal and guide the next crisis.

2. The Reactive Generation (the Thirteenth or X Generation) grows up as underprotected and criticized youths during an awakening, comes of age as alienated risk-takers, burns out young before mellowing into midlife pragmatists and family-oriented conservatives, and ages into caustic undemanding elders.

3. The Civic Generation (the G.I. Generation) grows up under new adult protection after an awakening, comes of age by overcoming a secular crisis, unites into a heroic and achieving cadre of rising adults, builds as powerful midlifers, and later finds itself attacked as elders during the next awakening.

4. The Adaptive Generation (Silent Type) grows up as suffocated children of crisis, comes of age as adult-emulating conformists, produces the indecisive mediators of the next awakening, and ages into sensitive and other-directed elders.

There are seven of 16 generations still living today in the United States. Two of these generations will likely have little impact on the travel industry because they are in the 90+ age categories. They include the "Missionary Generation" comprising peers of Franklin Roosevelt and activist W. E. B. DuBois, and the "Lost Generation" comprised of the peers of people like Dwight Eisenhower, Harry Truman, and F. Scott Fitzgerald. The five remaining generations make up the "generational constellation" of the 1990's, and they directly impact the travel market. Table 2 lists today's generations, their birth years, personality labels, and consumer profile and traits.

These generational personalities cycle through history. An Adaptive Generational Personality is followed by an Idealist Generation Personality followed by a Reactive Generation Personality followed by a Civic Generation Personality. These generations and their respective personalities, affected by major societal events, impact related recreational activities and tourism. For example, within a generation the participation rates in certain recreational activities are likely to change or grow as people age (fishing, for example), while other activities will likely

Table 1—The generational diagonal and cycle in the twentieth century.

SOCIAL MOMENT

		Secular Crisis			Spiritual Awakening	
		----			----	
		----			----	
		----			----	
Constellation Era	Inner- Driven Era <u>1901-1924</u>	Crisis Era <u>1925 - 1942</u>		Outer- Driven Era <u>1943 - 1960</u>	Awakening Era <u>1961 - 1981</u>	
	•	----		•	----	
ALIGNED YEAR	• 1924	----	1942	• 1960	----	1981
ELDERHOOD	• PROGRESSIVE • (Adaptive) • sensitive • •	• • • • • •	MISSIONARY (Idealist) visionary	• LOST • (Reactive) • reclusive • •	• • • • • •	G.I. (Civic) busy
MIDLIFE	• MISSIONARY • (Idealist) • moralistic • •	• • • • • •	LOST (Reactive) pragmatic	• G.I. • (Civic) • powerful • •	• • • • • •	SILENT (Adaptive) indecisive
RISING ADULTHOOD	• LOST • (Reactive) • alienated • •	• • • • • •	G.I. (Civic) heroic	• SILENT • (Adaptive) • conformist • •	• • • • • •	BOOM (Idealistic) narrcissistic
YOUTH	• G.I. • (Civic) • protected •	• • • • • •	SILENT (Adaptive) suffocated	• BOOM • (Idealistic) • indulged •	• • • • • •	THIRTEENTH (Reactive) criticized

Source: Strauss, Howe, Neil. 1991. *Generations: the history of America's future, 1584 to 2069*. New York: William Morrow and Company: 79.

decline (racquetball, for example). An interest in viewing wildlife and learning about environmental issues is likely to grow among an idealistic generation. Trends in risk-taking activities such as bungee cord jumping and ski boarding, have also become popular among the reactive generation, such as the Thirteenth or X Generation. But how does the propensity to travel change as generations move through age categories? Could an adaptive generation exhibit more propensity to travel due to penned up demand from earlier years? What generational characteristics and personalities are likely to impact U.S. travel abroad?

Purpose of Study

The following questions were analyzed:

1. What has been the overall U.S. travel abroad participation trend from 1979 through 1991?
2. How have participation rates in U.S. travel abroad within individual age categories changed from 1979 through 1991? Can watershed years be identified in a

13-year span? Has U.S. travel abroad changed by volume segments (light, moderate, and heavy) within individual age categories from 1979 through 1991?

3. How have participation rates of generations who travel abroad changed as these groups passed from one age category into the next (for example, from 25 to 34 in 1980 and from 35 to 44 in 1990)? Will generational characteristics and personalities impact the travel abroad of U.S. citizens?

Methods

To conduct this analysis of travel abroad, data were drawn from the Study of Media and Markets—Travel (Simmons Market Research Bureau, Inc. 1979 to 1991). (Note: Permission to use the travel data base was granted by Simmons Market Research Bureau, Inc., of New York for this study. The interpretation of these data is the author's and Simmons is the source.) These annual market studies were stratified, national random probability samples. The methods included the distribution of self-administered questionnaires, personal interviews, and

Table 2—Generations, birth years, generational personalities, and consumer profile.

Generation	Birth years	Generational personality	Consumer profile and generational traits
G.I. Generation	1901-1924	Civic	"Busy" senior citizens, "mature" consumers, possess a sense of public involvement and seek late-life rewards through early life heroism; want it "big" but do it together; the happiest of existing generations; most well off financially of any elder generation.
Silent Generation	1925-1942	Adaptive	Experienced sacrifice in childhood; managers of society; give freely to charity and causes; see both sides of an issue; believe in fair process; seek gratification after years of sacrifice—feel they never really enjoyed life the first time around; outer directed and influenced by others, but constantly seeking personal turning points.
Boom Generation	1943-1960	Idealistic	Inner directed and driven, self-absorbed; seek justification and purification; critical thinkers; desire the best; spurred the growth of the dual income household to keep pace and seek meaningful careers, personal freedoms and lives with more meaning.
Thirteenth Generation	1961-1981	Reactive	In the process of defining itself as it ages; seen by others as shocking on the outside and unknowing on the inside; "MTVish;" seen by selves as pragmatic, quick, sharp-eyed and willing to step outside self to understand life; redefining thrifty.
Millennial Generation	1982-????	Civic	Cute, cheerful, scoutlike, wanted, protected by older generations; group-oriented; public attention focused on this generation; behind the push to family values and activities; allowances have increased steadily and their savings rates has risen sharply; will likely plan purchases and seek quality.

Source: Strauss, William; Howe, Neil. 1991. *Generations: the history of America's future, 1584 to 2069*. New York: William Morrow and Company: 30-31.

followup telephone interviews. Sample sizes ranged from approximately 15,000 to over 22,000 adults per year. It is one of the largest and most consistently administered ongoing surveys of the travel industry in existence today. The sample statistics were then extrapolated to the U.S. adult population of 18 years and older. The data were made available through Simmons Market Research Bureau of New York and the University of Massachusetts Library. Only travelers who reside in the continental or coterminous United States (lower 48 states) were examined.

The nature of U.S. travel abroad requires the description of three major components of travel demand. First, "U.S. travel abroad" is defined as "any trip(s) outside the United States in the last three year period." This definition of "travel abroad" includes all types of travel taken that fit this description, but excludes travel for military purposes. Travel abroad would include travel to Canada and Mexico where travelers stayed overnight and would not count day trips by travelers in border states. (Note: Simmons labels this "foreign travel," but for this study and to reduce the confusion of foreign visitors coming to the United States, this type of travel is called "U.S. travel abroad." This study is not about foreign visitors to the United States, but it is about U.S. adults who travel to other countries.

Second, "participation rate" indicates what percentage of the overall population or age group traveled abroad. "Vacation, personal, business or business and pleasure" travel are the reasons people go abroad. For this study, age cohorts are configured as 18 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64, and 65 and older. The generations defined by Strauss and Howe (1991) are aligned with the study of 1979 to 1991 to examine how participation in travel abroad changes as generations moved through age

categories, and how U.S. travel abroad participation coincided with the generation as it moved through each of the various age categories. For example, the members of the Baby Boom Generation were born between 1943 and 1960, and in 1979 would be 19- to 36-years-old; therefore, the age cohorts of 18 to 24 and 25 to 34 would be dominated by members of this generation. A decade later, members of this generation would be 29 to 46 and would dominate the age cohorts of 25 to 34 and 35 to 44. Travel volume segments for this study are divided into three groups: "light" (one trip), "moderate" (two to three trips), and "heavy" (four or more trips) within the 3 years or each reference point year. For example, the reference year of 1979 would include travel taken by a person during the 3 years 1977, 1978, and 1979; and the reference year of 1980 would include travel taken by a person during the 3 years of 1978, 1979, and 1980.

From 1979 through 1991, data were analyzed using an average annual growth change rate, which is defined as the percent change in terms of the participation rate for the selected variable. To examine the generational effects, time lags or period changes are examined over three groups of years: 1979 to 1989, 1980 to 1990, and 1981 to 1991. For example, those age 25 to 34 in 1979 will have moved into the age cohort of 35 to 44 in 1989. These three micro-periods were examined to determine how the rate of travel abroad changed as a generation aged.

Finally, based on the descriptions of the generations provided by Strauss and Howe (1991) and the findings from the data reviewed here, speculation about the U.S. travel abroad market is made. Some of this speculation is not directly linked to travel data, but is linked to the knowledge about the different generations, current and future attitudes, values, and specific age points in the future that will impact each generation.

Selected Findings

Selected findings are presented below by travel and age-cohort variables within the context of travel abroad participation rates. The summary of national trends is presented first and followed by a closer analysis of the impact of travel within age cohorts. Finally, there is a closer review of the generational effect of age cohorts as they pass through various age categories.

U.S. Travel abroad Overview

Travel by U.S. adults to other countries increased in overall numbers from 1979 through 1991. There were an estimated 29.3 million travelers in 1979 who generated 53.2 million trips, and there were approximately 31.4 million travelers in 1992 who generated 72.9 million trips. However, the participation rates revealed a slightly lower percentage of U.S. adults who participated in travel abroad. In 1979, 18.9 percent of all adults traveled abroad, and in 1991, 17.2 percent did so. The actual participation rate declined at a slow rate of 0.4 percent per year. While this represents an overall decline in the percentage of the total population participating, the trends indicate some clear patterns. United States travel abroad participation was at its highest level in 1979 at 18.9 percent. It declined to a low point in 1983, remained relatively stable from 1983 through 1989 where it fluctuated only slightly between 14 and 15 percent, then reached its lowest point in 1988 at 14.1 percent, and rebounded to over 17 percent in the 1990's. Figure 1 indicates the U.S. travel abroad participation trends from 1979 through 1991.

Within Age Category Changes for Selected Travel Variables

Although viewing age categories separately and over time may be misleading, as indicated by Strauss and

Howe (1991), the analysis should suggest the impact of different generations moving through and into each respective age category, and watershed years may be identified. In terms of the overall changes in U.S. travel abroad participation within age categories, the rate of change was minimal, and a few patterns existed. There were slight increases in the participation rates of the youngest age cohort (18- to 24-year-olds) and the oldest age cohort (65 and over). Four of the age segments reflected a changing pattern of the total population—highest participation rates in 1979 or 1980, lowest participation rates in 1988, and a rebound in participation rates in the early 1990's. However, the change in the over-65 age cohort participation rates reflected neither of these patterns. The lowest participation rate for this cohort occurred in 1983 (10.2 percent) and its highest in 1990 (14.8 percent).

The Silent Generation appears to have dominated the travel abroad market for much of the 1980's. The younger half of this generation, the 45- to 54-year-olds, held the highest participation rates for travel abroad for every year but one—1983. The Silent Generation was largely in the 35- to 54-age categories from 1979 through 1989. The two age cohorts with the highest participation rates for travel abroad during this time were the 45- to 54-year-olds and 55- to 64-year-olds. A significant portion of both of these age cohorts were from the Silent Generation, although a portion of the G.I. Generation was also contained in the later age segment. After this period, they moved ahead one age category into the 45- to 64-year-old groups. For the Silent Generation, travel abroad behavior indicated a declining participation rate from 1979 through 1984 in the 45- to 54-age category. In 1979, the travel abroad participation rate was 21.9 percent, and it declined to 17.2 percent in 1984, rebounded in 1986, reached a low point in 1988 at 16.5 percent and grew through the late 1980's and into the 1990's. This represented the older half of the Silent Generation.

On a positive note for the international travel industry, participation rates have nearly all rebounded after the

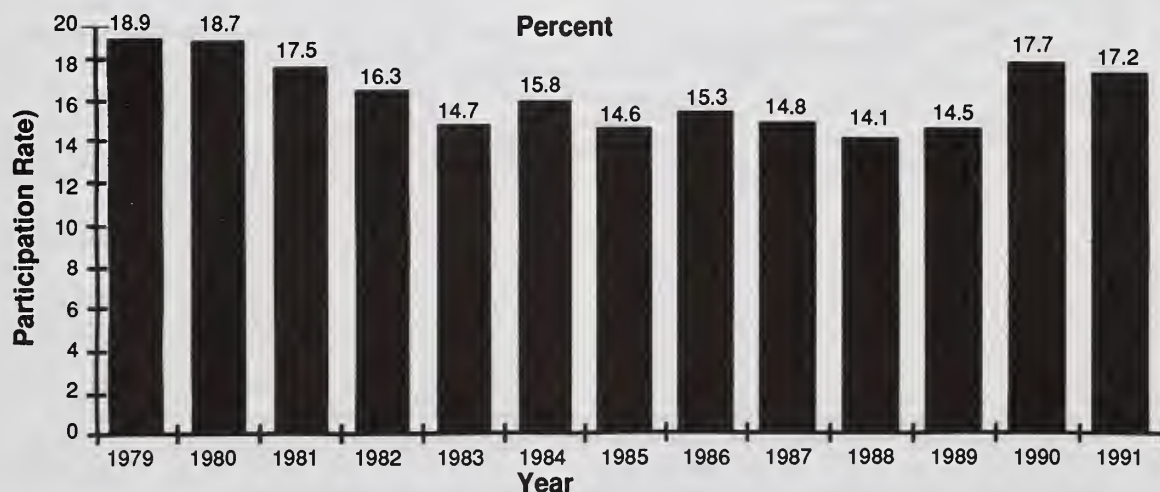


Figure 1—U.S. travel abroad participation rates: 1979 to 1991. Source: Simmons Market Research Bureau, 1979-1991. Study of Media and Markets. Vol. P-4. Travel. (Note each year indicates the travel participation for the actual year plus the 2 previous years or a 3-year period.)

1988 year. The year 1989 appears to be a watershed year similar to Warnick's (1993) findings in domestic travel. Caution must be observed, however, because participation rates only indicate what percentage of the overall population and individual members of age categories participated and not how frequently they participated. The 1989 year is also significant because it marks the defining year when each generation is nearly all confined within the individual age categories, and the categories are not diluted with two different generations. Therefore, we begin to see the full impact of the Baby Boom Generation's travel abroad patterns within the ages of 25 to 44 after 1989. A sharp increase in travel abroad participation rates occurred in both age segments (25 to 34 and 35 to 44) after 1988. Nevertheless, the increase in participation rates after 1988 for each generation indicates a positive future trend for the industry. But, the impacts of family life cycles and stages will still directly affect each generation. It is necessary, therefore, to look beyond the changes within the age categories and to follow the generation through time. Figure 2 indicates some of the age effects of these U.S. travel abroad trends.

The Transition of Generational Participation Rates in U.S. Travel Abroad

As each generation passes through the different age categories or stages in life, their participation in a wide variety of activities is directly affected. We examined the transition from one decade to the next. The generational participation rate changes were reviewed as the generation aged from one decade to the next within the context of three periods (1979 to 1989, 1980 to 1990, and 1981 to 1991). The participation rates of each generation, except

the younger half of the Silent Generation, declined as they aged. The Baby Boom Generation's participation rate declined only slightly, -0.1 percent. The 35- to 44-year-olds in the early 1980's who turned into 45- to 54-year-olds in the early 1990's actually participated at higher rates as they aged. The increase was 1.3 percent for this segment of the Silent Generation. The other Silent Generation's counterparts experienced a decline in participation of 2.5 percent as they aged from 45 to 54 and from 55 to 64. The G.I. Generation also did not engage in U.S. travel abroad at a higher rate. However, the limitations of the data must be noted. It is difficult to reach any conclusions about the G.I. Generation as it moved into the over-65 age category because at least two other generations reside in this category, and a larger "old" population (85+) is not likely to participate in travel abroad ventures. It seems reasonable to embrace the fact that the stability in U.S. travel abroad trips may be attributed to one generation that wishes to continue to travel at a higher rate, and this has offset some of the decline in travel participation by other generations even as they age. Generational changes in travel participation rates are found in table 3.

When the generational aging effect was examined within the volume segments, each of the three generations (Baby Boom, Silent, and G.I.) experienced declining participation rates within the infrequent travel-volume segment. The Silent Generation's younger half (35- to 44-year-olds who turned into 45- to 54-year-olds a decade later) had participation rates that declined the least. For moderate travel-volume travelers, two of the three generations (Baby Boom and Silent) had higher participation rates as they aged. The Silent Generation's younger half (those 35- to 44-year-olds who turned 45- to 54-year-olds, a decade later) had participation rates that increased the most. For frequent-travel-volume travelers, two of the

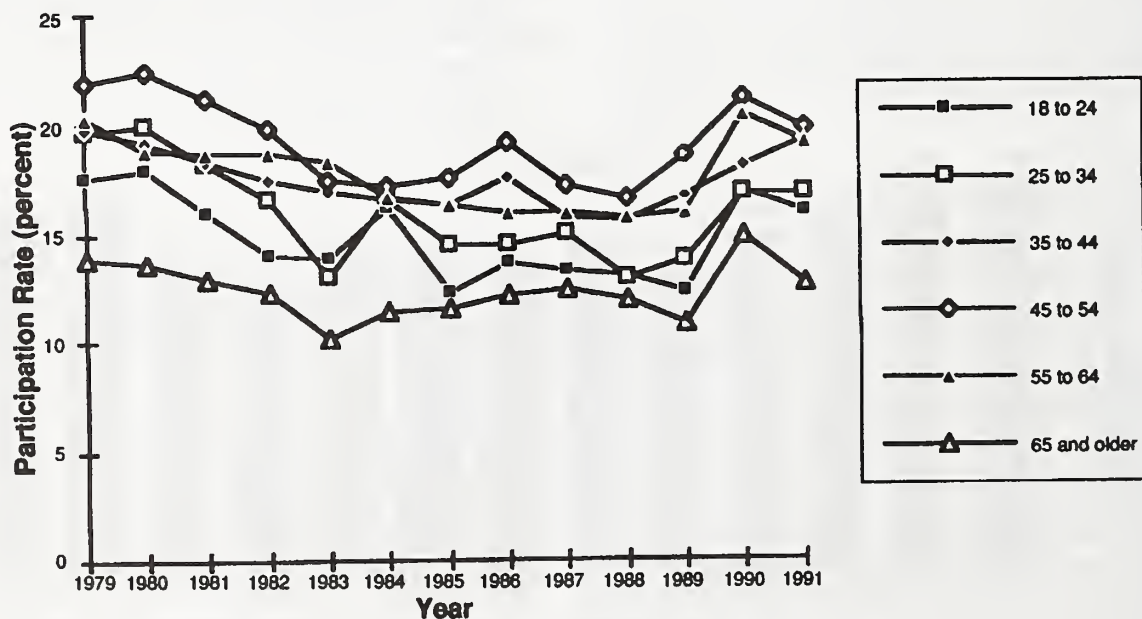


Figure 2—Participation rates for U.S. travel abroad within age categories, 1979 to 1991. The age group with the highest participation rate over time has been the 45- to 54-year-olds. Note the watershed year of 1989—participation rebounded in 1989. Source: Simmons Market Research Bureau: (1979 to 1991). Study of Media and Markets. Vol. P-4, Travel.

Table 3—Generational changes in U.S. travel abroad participation rates: 1979 to 1989, 1980 to 1990, and 1981 to 1991.

Generation, age category, year	Part. rates		1979-1989 change	Part. rates		1980-1990 change	Part. rates		1981-1991 change	Average decade change rate
	1979	1989		1980	1990		1981	1991		
	----- Percent -----									
Baby Boom Generation										
18- to 24-year-olds	17.6			14.0			16.0			
->25- to 34-year-olds		13.7	-3.9		16.8	2.8		16.8	0.9	-0.1
25- to 34-year-olds	19.7			16.5			18.2			
->35- to 44-year-olds		16.7	-3.0		18.0	1.5		19.3	1.1	-.1
Silent Generation										
35- to 44-year-olds	19.8			17.4			18.3			
->45- to 54-year-olds		18.5	-1.3		21.1	3.7		19.8	1.5	1.3
45- to 54-year-olds	21.9			19.8			21.1			
->55- to 64-year-olds		15.9	-6.0		20.4	.6		19.1	-2.0	-2.5
G.I. Generation*										
55- to 64-year-olds	20.3			18.6			18.7			
->55- to 64-year-olds		10.8	-9.5		14.8	-3.8		12.6	-6.1	-6.5

*The generation change of the G.I. Generation is reported for consistency only; this generation's international travel participation rates are confounded by the presence of two other older generations, (those 85+).

Note: The participation rates here represent the rate of travel abroad of each portion of three generations (Baby Boom, Silent, and G.I.) in the earliest period (1979 for example) and then the participation rate of the same generations one decade later (1989 for example). The decade changes for each period are then averaged over the three times (1979 to 1989, 1980 to 1990, and 1981 to 1991) to arrive at an average decade change rate.

Source: Simmons Market Research Bureau. 1979-1981. 1989-1991. Study of Media and Markets, Vol. P-4, Travel. New York.

three generations (Baby Boom and Silent) had higher participation rates as they aged. Again, the Silent Generation's younger half (35- to 44-year-olds who turned into 45- to 54-year-olds a decade later) had participation rates that increased the most.

Discussion

Trends were evident in the U.S. travel abroad market from 1979 through 1991. In summary:

- The travel abroad market is relatively stable as defined within the context and over the period of this review, with only a slight decline in the adult participation rates.
- The market reached a significant turning point or watershed years around 1988 to 1989, with increases in participation occurring thereafter.
- It is experiencing growing participation rates among two age segments, those over age 45 and those under age 25.
- There is a strong growth market in a portion of the Silent Generation, those who have recently moved into the 45- to 54-year-old age segments.
- The market is perhaps experiencing a higher rate of participation by the Thirteenth Generation or the Baby Bust Generation.
- The travel abroad market, although experiencing a slight decline in the participation rates of Baby Boomers, has not yet experienced the full impact of this generation's desire to travel abroad.

While it is interesting to uncover and track trends in travel, the real importance of these trends is applying the "art" of foreseeing the future or the sustainability of the

U.S. travel abroad market for businesses and for countries in planning and marketing their destinations. In the following section, these points are discussed, and speculation about the future of these markets is raised.

Growth Markets

Although the overall participation rates of U.S. adults who travel abroad have declined slightly during this 13 years (1979 through 1991), the market has changed and grown in the number of travelers and trips. This is somewhat remarkable because domestic travel has declined (Warnick 1991) and the number of terrorism incidents overseas has increased. Those who travel only occasionally or infrequently (one time within 3 years) are now even less inclined to travel overseas. The dynamics of the market have changed. Those who travel more often have continued to do so and have increased their travel rate at such a pace as to offset the decline in the occasional traveler who goes abroad. This explains the increase in the number of trips.

The future of the U.S. travel abroad market looks positive. The preretirement market of the Silent Generation is one of the strongest growth markets revealed here. The young adult market (those under 25 or the Thirteenth Generation) also appears to be growing. Participation growth rates were the strongest for this group and were particularly strong among those who travel at least a moderate rate (more than one trip every 3 years). In addition, the Baby Boomers have not lost their zest for traveling abroad, and most of them have not reached the preretirement years when higher rates of travel are likely to occur. The

rate of travel by the G.I. Generation is likely to slow, and the older half of the Silent Generation is also indicating a slowing pattern of travel abroad.

Finally, the watershed years of 1988 to 1989 indicate a turning point in trends, resulting in travel increases overall within most age groups and generations. The sheer individual volume of trips appear to be comprised of individuals who are older and who travel more frequently. This turning point also provides a positive light for the industry because a recent study (Roper Poll 1992) indicates that the first thing one would do after the current recession ended would be to take a vacation trip. The upswing in participation rates among all age groups from 1988 through 1990 was positive; however, each age group except the 35- to 44-year-olds had participation rates that declined from 1990 to 1991. (Note: This was the year of the Gulf War). It is not clear if the downward trend in 1991 will continue; it is likely a downward spike for the short term due to the Gulf War.

Age Effects

Several interesting points must be noted with the review of age-related travel participation rates. First, the largest of our current generations, the Baby Boomers, traveled only slightly less during the 1980's. This decline may be partly explained by all the distractions and life cycle changes that they experienced—the “get ahead” attitude of an “inner absorbed, perfection and self aspiring” generation during this time. Later, in the early 1990's, they are absorbed by careers and family life. But the decline is only slight, which should be encouraging for the travel industry. An opportunity looms over the horizon for those who can attract the Boomers, and the market potential will grow as the Boomers empty their nests of children and enter early retirement within the next two decades. There is likely a high end (high income) Baby Boom family market that will desire to travel abroad. These Baby Boom families will grow in numbers over the next decade as their children grow older. They will seek high-quality, value-oriented, value-added, and educational experiences. The Baby Boom family market will eventually evolve into frequent traveling, empty-nest Baby Boomers.

Generational Cycles and Impacts on Travel—The generational personalities described by Strauss and Howe (1991) of idealistic, reactive, civic, and adaptive generations and their repetitive cycles also provide us some opportunity to predict U.S. travel abroad activities. While we cannot predict the specific times, activities, places, and dates of major travel events that could transcend the opportunities to travel to international locales, the generational cycles and characteristics of existing generations can help us to predict and understand the style, attitudes, and behavior of each of our current generations as they evolve and travel in the future.

Strauss and Howe (1991) indicate that the recurring generational cycle of the 1990's is similar to the mood of the 1840's, 1750's, and 1650's. In each of those eras, the existing generational constellations were the same with the powerful and worldly Civics (today's G.I. Generation)

passing from the scene; Adaptives (today's Silent Generation) who are sensitive and process oriented entering the elderhood; Idealistics (today's Baby Boom Generation) moralizing institutions, family, and community life entering midlife; Reactives (today's Thirteenth or Baby Bust Generation) coming of age and attempting to define themselves; and a new generation of Civics (today's Millennials) being born and protected.

The Silent Generation has become a different breed of senior citizen (Strauss and Howe 1991). The rise in participation rates of this generation in U.S. travel abroad is clearly evident and promising. This generation is “other directed, sympathetic to the disadvantaged, and prone to take risks and adventures which eluded them in earlier years” (Strauss and Howe 1991, p. 32). They will want to stay culturally and socially involved with younger generations, particularly the protected generation of the Millennials (their grandchildren). The rise in U.S. travel abroad participation makes the Silent Generation a prime upcoming market for at least the next decade. Many who are empty nesters will seek both “soft adventure” and perhaps exotic travel to international destinations. They are the prime target market for ecotourism in the short term. They are likely to seek “ecotours” with creature comforts they have grown accustomed to over the past two decades of traveling. The Silent Generation is not as likely to be environmentally driven in their attitudes as the Baby Boomers and the Thirteenth Generation will be. Trips to historic places or visits to rediscover family roots or origins will likely become popular among the Silent and G.I. Generations. Good examples are the experiences of these seniors returning to the battlefields of Europe during recent World War II 50th anniversary commemorations. Although trips to ecologically sensitive areas may appeal to these generations, it is not as likely to be as strong as the desire by Baby Boomers as they age for such travel.

Boomers are beginning to take control of national politics, as predicted by Strauss and Howe (1991). Their control will focus attention on issues that will directly affect the international travel industry. The perfectionism they bring to family and their desire to return to community life will cause an increase in their travel abroad patterns. We have only begun to see these patterns evolve in the early 1990's as they begin to see the world as one large community—a community of nations. They are likely to be a more demanding market, seeking educational and life-enriching experiences. They also will demand that their children (members of the Millennial Generation—the civic minded, protected generation) be offered the best in their vacation experiences. Environmental and educational, but fun experiences will be popular with these types of families. Activities which bring families together will increase in popularity. Stress reduction activities should also gain in popularity among Baby Boomers because of their high expectation levels and the stress in their work lives. They will seek to leave the stressful United States and visit more tranquil foreign destinations. The environmental attitudes of this generation, their demands, and their idealistic values will change the concept of ecotourism, how it is defined, and what it will mean.

The Thirteenth Generation (Baby Bust or X) has, as described by Strauss and Howe (1991), lived a luckless

life cycle and are America's most disadvantaged generation. To date, the generation has reacted with what appears to older adults to be "radical" interests; heavy metal music, MTV, unconventional hairstyles and dress, and unemotional sex appear to be some of the ways that the generation sets itself apart from the older Boomers. Because many are materialistic, they seek consumptive lifestyles. They are also described as a "boomerang" generation, returning home after venturing out to test adulthood. More of them may take time off to travel and explore other countries before settling into careers. They are a market for adventuresome or even longer stay, low-cost travel. Some will actually drop out of the workforce to travel or move to exotic locations and work part time in the travel industry to enjoy a destination's experience and lifestyle. The next great generational feud may be between Baby Boomers and the Thirteenth Generation. Travel marketers and suppliers would do well to separate or segment these groups and provide separate venues for their interests. Eventually, as this generation ages and burns out young, they will retreat to family life and strengthen it. This will likely slow their desire for travel abroad because they will represent households that do not pack the economic well-being or prosperity of the older Baby Boomers.

Finally, the Millennial Generation (those born from 1982 to present and a generation that is still being formed) will become the new Civic Generation of the future (Strauss and Howe 1991). Family travel decisions will be strongly influenced by their desire to learn. They will desire to travel to more distant lands, to possess a global understanding of issues, and to be less ethnocentric.

Generational Marketing in the Travel Industry—The generational cycle and the interests of these groups will change and evolve in the coming decades; this will affect how we market the travel industry. It must be sensitive to generational messages as it targets likely travelers. To sustain a market, one must know the market. Successful agencies will understand this phenomenon, and messages must be developed that pay attention to where the generation is headed and not to where it has been (Warnick 1993).

A prime example of recognized generational changes is Club Med. Just over a decade ago, Club Med primarily targeted singles, many who were Baby Boomers. Today, Club Med's primary market is families. It may well change to seniors in the next decade. Travel agencies, suppliers, airlines, and credit card companies should be aware of the changing impacts the aging population will have on the travel abroad market. Opportunities will exist for those who plan ahead and seek to satisfy the needs of these future growth markets.

Conclusions

What does the future hold for the travel industry in travel abroad among U.S. citizens? I hope some of the questions have been answered here. The international travel industry has experienced a rather stable U.S. travel market that traveled abroad despite dramatic changes in worldwide economies and despite political unrest. Its long-term

future looks positive. Future technological innovations in travel are likely to further enhance the sustained long-term growth of this market. Long term, there are signs that market conditions will improve, and we have already experienced a watershed or turning-point year. More retirees and an aging population with more free time and discretionary income should help to increase the U.S. travel abroad demand.

Short term, the Silent Generation of preretirement adults is a strong growth market, the growing family market and the new Millennial Generation must not be overlooked as important niches, and the young adult market shows strong growth potential in low-cost travel. Growth in the travel abroad market is likely to occur because the participation rates of older individuals are higher in the 45- to 64-year-old age segments. The large Baby Boom market is just beginning to reach these age cohorts, and this signals future growth potential. The markets in the United States exist, and the demand from these markets to travel abroad will likely grow. The growth will be concentrated within the Silent and Thirteenth Generations in the 1990's and then will evolve into a growth market of Baby Boomers. After the turn of the century, the Silent and Thirteenth Generations travel abroad participation rates will likely curtail.

What are the consequences for ecotourism and tourism sustainability? With the potential for at least two decades of growth in U.S. citizens traveling abroad, more countries will push to more fully develop the tourism sectors of their economies. It was stated in this study that the current short-term growth markets among U.S. citizens are within the Silent Generation. Due to their generational circumstances, they are likely to visit foreign destinations that cater directly to their particular travel style preferences. They possess different environmental attitudes. Although environmentally aware, they are likely to travel to destinations that may be exotic but that also offer the comforts of modern travel. For underdeveloped countries, there is the potential for intensified development of the tourism infrastructure based on their travel demands. However, the nature of U.S. travel abroad is likely to change as the current generation of travelers is replaced with a different generation, the Baby Boomers, who possess different values and orientations toward travel and the environment, and this will change how countries market ecotourism.

As the Baby Boom Generation travel abroad patterns increase after the turn of the century, the meaning of ecotourism is likely to become more clarified. This is an idealistic generation with strong environmental attitudes. They are not likely to just "visit" a new or different destination; they likely may desire to "experience" the culture and environment of the foreign destination. Their orientation to travel abroad is likely to be different than that of the preceding generation. A growing portion of this generation will seek destinations where their impact is minimal. After the majority of the Baby Boom Generation reaches the age of 65 years and older, around the year 2030, the U.S. travel abroad market is likely to decline until a significant portion of the Millennial Generation (today's children) reaches the age of 45. This should occur in the later half of the 2030 to 2040 decade. The Thirteenth Generation, after being involved in travel abroad as young

adults, will likely not travel abroad as much as the Baby Boom Generation because of their economic well-being. They are not likely to be a strong growth market for traveling abroad, even when they reach the prime traveling age of 45 to 64.

One word of caution. This review of U.S. travel abroad is based largely on the travel-participation rates of the various generations. It does not take into consideration such extraneous factors as the impact of oil prices, inflation, or even terrorism. This raises the question of whether the patterns of change revealed here are due to the changes in the generations' orientation to travel, or are the changes impacted more by these other economic and political factors. There is some evidence in these data that foreign terrorism incidents may impact travel behavior. The Gulf War probably contributed to the downturn in the 1991 travel rates. Future incidents may well restrict Americans' desire to travel. This is even more important in travel abroad because a large portion of this travel is for vacation purposes. Vacation travel is voluntary and could be curtailed if too many Americans feel threatened abroad. Even though the market exists, its motivations could be severely altered by the threat of unrest in many countries or even the perception of unsafe travel. It is difficult to predict how economic, political, and generational changes will impact U.S. citizens travel abroad. However, this review provides a different perspective from which to view market changes.

This study did not look at where the generations go when they travel abroad, what they do, how much they spend, or why they desire to travel abroad. These factors are likely to reveal additional insights into the differences between the generations. All travel abroad was grouped together for the purpose of this study, and travel purpose was not further segmented. For example, if more U.S. companies develop global orientations, business travel abroad will increase. Business and vacation travelers demand different services from international destinations. If intercontinental air travel becomes faster, additional vacation travel may occur. These issues will need further study.

U.S. travel abroad is complex, dynamic, and not always easily understood. This review of the travel market within the context of aging effects, generations, and generational cycles sheds additional light on the sustained growth and long-term outlook for travel abroad trends. The growth in the U.S. travel market of those who seek to visit other countries will lead many of these nations to strongly consider the development of a tourism-based economy. It is likely that with the growth of the U.S. market, more exotic destinations will be explored, and perhaps more fragile

environments will become threatened by tourism development. Tourism sustainability must consider the size and changes in the demands of the marketplace. The U.S. market's desire to travel abroad will increase, especially during the first two decades of the next century. Overall travel trends can be misleading without considering the changing context of an aging population and its set of generations. New and evolving markets exist. Those who understand and provide quality service, who plan for the impact of future travel demands, and who look ahead in their generational assessments of the marketplace will be better prepared for the future of the tourism industry.

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Ecotourism as a Mechanism for Economic Enhancement in Developing Countries

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Marit Johnson Vogelsong

Abstract—The definition and philosophy of ecotourism is environmentally responsible travel that parallels the idea of sustainable development. It has the potential to be an ecologically, economically, and culturally sound mechanism for socioeconomic enhancement in developing countries. This paper presents some potentially positive and negative environmental, cultural, and economics effects on developing countries. Ecotourism is still in its infancy and accurate data are limited. Managers need reliable data on ecotourism sustainability to predict its economic potential.

Ecotourism is defined as travel where visitors enjoy and appreciate nature and still promote conservation. It encourages low visitor impact on the environment while providing socioeconomic benefits to local people (Boo 1990; Lindberg 1991; Merlino 1993). Ecotourism generally connotes an interdependence of conservationist and tourist ideals, a new trend in tourism, and it takes both participants (tourists) and promoters to make it work. If promoters do not promote ecotourism destinations, then participants will not participate in ecotourism, but the motivations of the two groups may be contradictory. For example, although their motivation may not have an ecological basis, tourists using a nature trail may describe their activity as ecotourism (though not using the term). This deletes the "eco" from ecotourism. Conversely, ecotourism hopefully occurs without any impact to the environment, threatening to delete the "tourism" from ecotourism. Tourism implies human activity and usually impacts the environment. Ideally, ecotourism should consider the ecological and socioeconomic motivations of both participants and promoters.

Ecotourism originated within the "responsible tourism movement" of the 1970's and was a reaction to cultural spoliation, economic incongruities, and the destruction of natural resources. New ideologies and associations developed. Environmental tourism in the 1980's then led to ecotourism (Boo 1990).

Boo (1990) listed two global trends that furthered interest in ecotourism. First, she noted an increasing demand for touring ecologically protected areas. Developing countries earned \$55 billion from tourism in 1988; between \$2 and \$12 billion of that revenue came from ecotourism

(Lindberg 1991). Second, she discussed a growing awareness of the need to integrate natural resource conservation with the economic needs of rural populations who rely on those resources. Currently, there is a shift away from strictly preservationist park and reserve operations toward integrated development operations (Boo 1990).

Ecotourism becomes credible as a money generator by aligning itself with the sustainable development movement. Sustainable development's goal is to meet the environmental, cultural, and economic needs of the present generation without compromising the needs of future generations (World Commission on Environment and Development 1987).

Idealistically, ecotourism is sustainable tourism, providing a means of stimulating economic activity by balanced use and conservation of natural resources, thus avoiding resource degradation. Although ecotourism may not be a panacea for the fundamental problems between development and ecological protection, it has the potential to be an equalizer.

In this paper, we discuss how ecotourism meets the goal of sustainable development. We describe environmental, cultural, and economic sustainability and the negative impact ecotourism may have on the environment, culture, and economy, presenting examples of how developing countries are using ecotourism to meet the sustainable development goal. People in developing countries generally have a low standard of living because of inadequate development of the economy and industry. Many subsist as poor, rural farmers, and ecotourism may help raise their standard of living.

Economic welfare depends on development. But some view economic development as incompatible with environmental protection. Nevertheless, development in some form will continue. The evolution of tourism and self-preservation in developing countries may be dependent on maintaining the quality of their natural resources. There is growing awareness that the care of the environment is an essential aspect of development, and people are increasingly accepting the idea of balancing political, societal, and economic needs with ecological needs (Romeril 1985).

What are the benefits that ecotourism can provide to developing countries? This paper explains how developing countries can use ecotourism to enhance economic growth and development while maintaining sustainability.

Ecotourism and the Environment

Tourism consumes resources and can damage the environment, thus threatening the economic viability of tourism. We need to measure the impact of tourist activities

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on the environment. "The concept of carrying capacity represents a way to conceptualize the relationship between intensity of use and the management objectives for a resource area" (Farrell and Runyan 1991, p. 31). Carrying capacity implies that specific resources can withstand measurable amounts of use beyond which degradation will occur. Unfortunately, "...the search for explicit carrying capacity is often futile" (Farrell and Runyan 1991, p. 31-32), and "...carrying capacities have been pursued almost as ardously as the Holy Grail, with about as little success..." (Butler 1991, p. 205). Stankey and McCool (1984) noted that recreational experiences include many components. Each component varies in its conspicuousness to the visitor, making measurement difficult. Nevertheless, carrying capacity must be considered (see Graefe and others 1984; Stankey and others 1985 for a complete explanation).

Conditions

Managers must consider what conditions are acceptable or appropriate to most visitors. Boo (1990) recommended measuring conditions in ecological and aesthetic terms. Negative changes in wildlife behavior and population dynamics, water quality, soil erosion, and the availability of firewood for human use show some ecological effects of stressed carrying capacity. Surveys and assessments of visitors are appropriate methods to measure changes in an area's aesthetic value. Managers can implement design and development guidelines based on data from surveys and assessments.

Once managers estimate carrying capacity or conditions, stress related to exceeding these conditions may be controlled by (1) limiting the number of visitors, (2) hardening the resource (fence, pave, build trails, restrict traffic), (3) attracting more culturally and environmentally sympathetic tourists, and (4) educating tourists and hosts to reduce negative impacts and control development (Butler 1991). These must be included in ecotourism development guidelines.

Belize, a small Central American country, is relatively unspoiled; 80 percent of its original, natural vegetation is intact. "Programme for Belize" is an experimental project that integrates environmental and tourism issues. The Belize project restricts tourism so that the forests, wildlife, and Maya temples that attract tourists to Belize remain intact (Wilkinson 1992). According to Belize's management plan, tour groups will be limited and supervised by experienced naturalists.

Tourism requires physical infrastructures such as roads, airports, shipping ports, paths, and sewers, and suprastructures such as hotels, restaurants, shops, and places of entertainment. Construction does not have to degrade the local environment, even though it is necessary for tourism development and its subsequent economic benefit. One example is the Metro Alpin, an underground railway in the Swiss Alps. The Swiss chose the underground option to avoid the negative aesthetic impact that aboveground cable cars could have on the landscape (Romeril 1985). Maintenance is easier, and glacial skiing is now accessible year-round. Developing countries may consider similar options.

Attracting ecotourists sympathetic to global environmental concerns has the potential to promote environmental protection and to simultaneously create revenue. Ingram and Durst (1989) surveyed 78 tour operators who advertised nature-oriented activities in developing countries. They most frequently promoted Kenya, Nepal, Tanzania, Puerto Rico, Mexico, Costa Rica, India, Brazil, Paraguay, China, and Ecuador because they offer multiple nature activities. For instance, Costa Rica has specifically targeted its tourist market and developed a blueprint for tourism that emphasizes a commitment to conserving its natural environment.

Education

Education of tourists and host countries is essential to sustainable ecotourism. At national and local levels, promotion of environmental education is occurring. In 1989, Belize placed both tourism and environment under one ministry. Belize adopted the principles of Agenda 21 (a plan from the United Nations Conference on Environment and Development). The plan calls upon all countries to practice and promote sustainable development, environmental protection, and citizen participation (Gonzalez 1993). Belize gives high priority to tourism as an economic development tool and has developed guidelines for tourism development. Belize's Integrated Tourism Policy and Strategy Statement of 1992 advocates "...increased education, training, and awareness at all levels regarding the benefits and careers available in tourism..." (Gonzalez 1993, p. 16).

Costa Rica is another example of how education works. The Costa Rican Tourist Board (1993) simplifies exchange between all sectors that have an interest in that country's tourism. Specifically, the Tourist Board, the National Park Service, and the Costa Rican National Tourism Chamber are working toward synergistic decisions between protected areas and private and public tourism.

Ecotourism and Culture

Cultural change due to tourism effects may be most obvious in developing countries. According to Coltman (1989), tourism's negative effects on native culture take many forms, including gambling, prostitution, and drunkenness. Local people may want the same luxuries as tourists. Racial tensions may develop between tourists and their hosts. "Trinketization" of crafts and art may result from the volume of goods needed for the tourist trade. A loss of cultural pride may occur, especially if the visitor sees the culture as quaint or as entertainment. Kariel (1989) assessed tourism's influence on residents living in alpine communities in Austria. Residents reported that tourism affected family structure; they spent less time with family members and more time with tourists.

Just as ecotourism has aligned itself with ecological carrying capacity, it has also aligned itself with social carrying capacity. Social carrying capacity for tourism "...is the level beyond which unacceptable change will be caused to local cultural stability and attitudes toward tourists"

(Lindberg 1991, p. 27). Including indigenous people in the planning process will help assure that social carrying capacity is not exceeded and that their culture and values are maintained.

Ecotourism must remain on a small scale and be directed toward reserves and parks in rural areas. Dispersion of small groups of tourists into rural areas dissipates their impact and is less likely to have major negative effects on communities.

In some areas of the world, indigenous people have formed organizations to defend their rights to the land and to practice their own land management. Some natives are eager to show how they are managing and protecting their lands. They encourage tourists to share in their traditions and lifestyle. For example, indigenous Indians of Casapira, Ecuador, now design and manage tours of their community. In the past, the community and their lifestyle were mere tourist curiosity. Indians established a nature trail and built guest houses modeled after their own dwellings. Guests receive traditional food in the evenings, and the Indians share native dances and myths. In turn, the Indians request that guests demonstrate and describe their own cultures. This method of tourism allows visitors to gain both an authentic view of Indian life and of the local ecosystem. Macdonald (1993) noted that this type of tourism leads to a greater understanding of cultures. It is deeper than glimpses of elaborate ceremonial life and artisan works.

Ecotourism and Sustainable Economics

Tourism does not guarantee development that is always in the best interests of a country, but ecotourism has the potential to be a viable means of economic growth in developing countries. According to the World Bank, 55 percent of tourism gross revenues will be lost to economic leakage in developing countries (Boo 1990). Tourism needs to consolidate environmental, cultural, and economic issues. Boo (1990) noted that ecotourism requires less development and less investment, and involves less cultural and environmental disruptions than other forms of tourism, but it does require services and infrastructures to make it economically beneficial.

For many countries tourism provides an important share of the gross national product and stimulates foreign exchange (DeLarderel 1993). The economic benefits of ecotourism also encourage the establishment of protected areas. Lindberg (1991) cited an example of the justification of conservation by ecotourism. The Galapagos National Park, a popular nature tourist attraction in Ecuador, earns over \$560,000 per year, providing surplus revenues that help maintain Ecuador's other parks and reserves.

Ecotourism also provides an economic alternative to park encroachment. Rural people living near parks and reserves are the most affected by ecotourism and extreme poverty is common. In Latin America, the countryside is home to 60 percent of the poor (Mellor 1988). The rural poor depend on the environment for their income and often perceive parks and reserves as a threat to their survival.

Some governments directly compensate people affected by the establishment of parks. In Kenya, Maasai people receive \$30,000 per year to cover their losses. Parks also employ many people. In Nepal, the Tiger Mountain Group employs about 5,000 people during the peak tourist season (Lindberg 1991).

Ecotourism also has positive economic effects on parks. Increasing numbers of tourists may cause environmental stress, but the revenue generated can result in improved conservation management. Although funding for ecological and carrying-capacity studies is needed, entrance fees and donations could cover the costs. Parks with a high volume of tourists require a larger and more diverse staff. Higher demand for park staff may, in turn, increase the incentive to train and educate natives for long-term employment. For example, at the Baboon Sanctuary in Belize, native Belizeans operate the visitors' center and lead groups through the Sanctuary. This provides year-round, permanent employment.

A major problem with ecotourism at national and local levels is revenue leakage that results when outside investors are involved in tourism development. Investors hire outside managers, limiting the job market for locals and removing the profit margin from the country. Although tourism has the potential to create an economic multiplier effect, it stops short when outside investors take their returns home. According to Boo (1990), economic leakages may be easier to control through ecotourism than through other types of tourism, but this will occur only if native people are involved in the planning process. In Belize, increased Belizean entrepreneurship in the tourism industry is top priority with the Belize Tourism Policy and Strategy Statement Plan. Policies include an incentive act, the development of a small business bank, and the promotion of tourism cooperatives to curb leakage.

Governments must set goals and limitations for ecotourism to be sustainable. At the local level, ecotourism can best aid the economy by using local materials, products, people, and by including the rural poor in the planning process.

Conclusions

Ecotourism contributes to sustainable development in some countries. Three major risks of any type of tourism are environmental, cultural, and socioeconomic exploitation. Ecotourism philosophy addresses these issues. Tourism experts must develop ecological and social carrying-capacity standards for a sustainable ecotourism industry, employing various limits and restrictions. Lindberg (1991) recommended increasing entrance fees while limiting numbers of visitors, thus raising revenues and preventing exploitation. The increased revenues, in turn, should be channeled back into the parks and surrounding communities if ecotourism is to serve as sustainable development.

Conducting short-term and long-term studies to establish the sustainability of ecotourism is necessary, and raising entrance fees may provide funding for these studies. Other methods for increasing revenue include additional or enhanced visitor centers, shops, and concession stands.

How closely these and other businesses relate to the philosophy of ecotourism will be at the discretion of individual countries.

The inclusion of local labor and business is paramount to future development. It is the rural people who are in the greatest need of social and economic opportunities. Ecotourism, while supporting conservation efforts, emphasizes reciprocal social contact with local communities and creates economic opportunity.

Along with other industrial alternatives, ecotourism is a viable choice for development. The goal for developing countries is a sustainable economy—one that will persist. Ecotourism aligns itself with the sustainability goal. Ecotourism philosophy also considers the possible negative impacts of tourism and includes methods for limiting them. By promoting economic and cultural exchange and environmental conservation, ecotourism is a promising mechanism for economic enhancement.

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Tourism and Quality of Life





Sustainable Community-Based Tourism and Host Quality of Life

Neal A. Christensen

Abstract—The principles of sustainability in community development projects are recognized for their importance in protecting resident quality of life. Tourism development should include monitoring, evaluating, and improving host community quality of life as a condition for sustainability. Studies of tourism and quality of life in the host community should address both objective and subjective components and should include aspects of individual and community scales. This paper synthesizes and expands the literature on quality of life research as it relates to tourism development. A research framework and comprehensive definition of quality of life are proposed that more completely evaluate conditions of quality of life.

Linking Sustainability and Quality of life

Local governments and community-based nongovernment organizations often undertake development projects to improve the economy and to provide needed jobs and community stability. One of the implicit goals of these projects is to protect and enhance the quality of life of the local residents (Power 1988; Ritchie 1987). There is increasing recognition of the importance of the principles of sustainability in community development projects as a condition for protecting resident quality of life (Barbier 1987; Hawken 1993; Simon 1989).

"Sustainable development" is a term made popular by the Brundtland Commission in 1987 and was defined as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987). Barbier (1987) added that sustainable development is a process that must consider three systems: the biological and resource system, the economic system, and the social system. A primary objective of sustainable development, therefore, is to provide lasting and secure livelihoods that minimize resource depletion, environmental degradation, cultural disruption, and social

instability. These objectives are compatible with protecting the residents' quality of life.

Tourism as a Sustainable Development Tool: Some Concerns

Tourism is often considered as a viable option for community development that can improve the economy without compromising the environmental resource. However, there is evidence that tourism can have negative effects on the quality of life, especially the social and cultural aspects.

The most immediate concern of increasing tourism is the effect of overcrowding. In an opinion survey conducted by Martin and McCool (1992) among residents of Montana, many residents expressed concern that visitors to the state may crowd them out of local fishing, hunting, and other recreation areas. In another opinion study, Reid and Boyd (1991) found concern among residents of Niagara-on-the-Lake, Ontario, Canada, that the increased popularity of a local festival would lead to undesirable vehicle and pedestrian congestion.

Other studies suggest that tourism can have negative economic impacts to some residents. Fritz (1982) found evidence of an increased tax burden on local residential property owners as a result of vacation home development. Crotts and Holland (1992) reported increased inflationary pressures resulting from tourism development, particularly in the areas of housing and local government services. They also reported evidence of significant increases in local government debt with increased tourism activity.

Another concern of tourism development is change in the local community and culture. Perdue and others (1991) reported a significant shift of population into counties with high levels of tourism. This phenomenon was further supported by Christensen (1994) who indicated that counties in Montana with higher levels of tourism were more likely to have a growing population and more likely to have new residents who had recently relocated from out of state. Rosenow and Pulsipher (1979), describing tourism development in St. George, UT, indicated that poor planning and growth management had resulted in a loss of identity and local culture. The result is a town with few distinguishing features and little remaining of its unique setting and history.

If tourism development is to be viable as a long-term economic strategy, these concerns must be addressed, and the resource base must be protected in the process. The host community is the economic, social, cultural, and infrastructural resource base for most tourism activity, and resident quality of life is a measure of the condition of that resource. Tourism development should include monitoring, evaluating, and improving host community quality of life as a condition for sustainability.

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Purpose of This Discussion

This paper synthesizes and expands the literature on quality of life research as it relates to tourism development. A research framework is proposed based on previous theoretical and empirical work that more completely evaluates conditions of quality of life. Future research designed around this proposed framework may gain a better understanding of the dynamics of quality of life and its importance to individuals and communities. It is anticipated that better understanding of how communities change and develop will provide guidance for a sustainable tourism industry.

Developing a Definition of Quality of Life

Establishing a clear understanding of the complexities of quality of life is essential to its protection and enhancement. Definitions of quality of life in tourism research have ranged from straightforward to complex. Perdue and others (1991) defined quality of life as "The attributes of a community which both influence and reflect the caliber of life afforded its residents." Others have stated that quality of life consists of two components, the objective and the subjective. Wish (1986) interpreted quality of life as consisting of environmental and psychological aspects. Myers' (1987) definition stated that "A community's quality of life is constructed of the shared characteristics residents experience in places, and the subjective evaluations residents make of those conditions." Milbrath (1979) also preferred a two-component approach, with objective indicators supplemented by perceptions. Often, however, both components have not been included in research designs.

Social Indicators

Some studies have focused on measuring the objective component of quality of life by examining the correlation between social indicators of quality of life and tourism development (Crotts and Holland 1992; Perdue and others 1991). Social indicator analysis has some advantages. The variables to be compared may already be available as secondary data from other sources. Another advantage is that indicator variables that are measured periodically (with a relatively short interval) can be monitored for changing conditions. In addition, analyses of indicators can provide an unbiased assessment of actual physical conditions.

This methodology, however, has several weaknesses. The first is that correlations alone do not suggest cause-and-effect relationships. Drawing such an inference can be misleading and is not appropriate without specific tests for directional relationships built into the study design. Second, when comparisons are made between places, indicators such as crime rate, income, and number of golf courses may be considered equally important as contributors to, or detractors from, quality of life. Results of these analyses do not reflect true conditions unless consideration is given to the relative importance of the factors compared.

The use of social indicators is further limited by the artificial political boundaries, typically counties or Standard

Metropolitan Statistical Areas, used to quantify those measurements. The influences of indicators such as violent crime rate or acres of park land can reach beyond political boundaries. This limitation is manifested in "Places Rated Almanac" (Boyer and Savageau 1989) because it tends to identify larger cities as more livable due to the concentrated level of amenities. In contrast, other studies have concluded that residents perceive rural and suburban living conditions as providing a higher quality of life than exists in larger metropolises (Wish 1986).

Subjective Measures and Host Attitudes

Most studies have focused on the subjective component of quality of life by assessing residents' attitudes toward tourism and their perceptions of the local quality of life (Allen and others 1993; Belisle and Hoy 1980; Lui and Var 1986; Martin and McCool 1992; Pizam 1978; Reid and Boyd 1991). Unlike using correlations of social indicators, this approach allows individuals to rank the importance of particular quality of life factors. It also helps to identify and understand those individuals and groups that are most concerned about particular changes in their quality of life. In addition, qualitative research can identify emerging issues that might not be apparent when examining historical indicators.

One constraint with this technique is that perceptions and attitudes are difficult to monitor. Opinions generally are not quantifiable, which makes significant changes hard to detect. In addition, perceptions and attitudes may have little correlation with actual physical conditions. Also, as with correlational analysis of social indicators, cause-and-effect relationships cannot be determined by assessing perceptions of impacts. While this research method can detect perceived changes in the conditions of quality of life, it is difficult for respondents to separate the changes that were caused by increases in tourism from the many external forces that can also impact the community.

While both of these common study designs have weaknesses, their strengths complement each other. The two-component definitions of quality of life and the review of design limitations suggest the need for studies that use both quantitative and qualitative techniques.

Question of Scale: Individual to Community

Also absent from most definitions of quality of life and study designs is the consideration of the social structural scale at which changes occur. The scale of quality of life factors and impacts can range from individuals to neighborhoods, to communities and beyond. Rubin (1994) recognized scale in theories of community development as composed of the simultaneous struggle of the individual, the class, and the community. At one social scale, impacts may be positive; for example, when individuals benefit through new employment opportunities due to expansion of tourism activity. However, impacts may be negative at another social scale, such as when the tourism expansion occurs rapidly and overloads the community's infrastructure and service delivery systems.

Individuals will evaluate quality of life differently, depending on the scale they reference. A public official evaluating tourism's impact on local quality of life may assess current issues and conditions differently than a private citizen whose concerns about tourism development are at another scale.

A Comprehensive Definition

Study designs must address the issue of scale as well as objective and perceptual components to develop an understanding of the intricacy of quality of life. A more comprehensive definition of quality of life that would enhance research design might be: "A community's quality of life consists of shared characteristics at various social structural scales, and the subjective evaluations of those characteristics by the persons who are affected" (Myers 1987).

Developing a Theoretical Framework

A comprehensive definition of quality of life will lead to an improved theoretical framework. Application of theory is imperative when conducting quality of life research. Without theory it is difficult, if not impossible, to identify or determine the relative importance of various dimensions of quality of life. One weakness of past studies using objective indicators of quality of life was that the indicators were not assigned importance rankings relative to each other, or at best, rankings were arbitrary. An appropriate theoretical basis to this approach would identify ways to prioritize those conditions.

Ritchie (1987) acknowledged that the lack of a conceptual framework in tourism planning and development is one of the industry's failures, and it hinders the improvement of quality of life. He described the relationship between tourism and quality of life in terms of a common framework used to assess both positive and negative aspects of these impacts on the host region: economic, physical, social, psychological, cultural, and political. Ritchie suggested that certain impact dimensions are more important than others, and that the stage of society's development will influence host-visitor relationships. However, while he recognized that impact dimensions vary in their influence, his conceptual framework did not suggest a methodology to establish the relative importance of those dimensions.

Theory of Individual Development

Sirgy (1986) explored quality of life issues within the context of Maslow's Hierarchy of Needs Theory. This hierarchical framework addresses the relative importance of differing quality of life factors. Applying Maslow's theory suggests that some factors of quality of life are more salient than others, depending on the level of needs achieved by the individual. If an individual is unemployed, a job that can fulfill safety and economic needs may be of primary concern. However, if the lower order security needs (such as employment) are being met, then primary concerns would shift to fulfilling the higher order aspects (social, esteem, and self-actualization) of human development.

Maslow (1954) cautioned, however, that while physiological and safety needs usually take precedence over other needs, the structure of the hierarchy is not static, and it is the individual who defines that hierarchy according to her or his own set of values. This suggests the need to evaluate individual perceptions as an initial step toward applying a hierarchical framework in research design.

Theory of Community Development

While Maslow's (1954) theory addresses individual decisions and behavior, it may not be applicable at the community scale. Decisions affecting the entire community are not always carried out based on the average hierarchical level of need of all citizens. Decisions typically reflect compromises and concessions to many interests having different perspectives of scale.

Because of diversity in communities, policies are formulated, decisions are made, and changes occur that effect many individual hierarchical needs. It is necessary, therefore, to develop a theoretical basis for quality of life research that adequately addresses individual behavior and perceptions as well as community-scale characteristics. This framework may consist of a combination of elements from individual behavior and social change theories.

Rubin (1994) called a framework for community change "Organic Theory of Community Development." The term organic is used because the theory was developed from the field experiences of practitioners rather than from academia. This theory suggests ways to balance social change and development agendas while empowering individuals and improving communities. One of the central points of this theory is that community development efforts that empower individuals act as catalysts to improve the whole community.

Within this framework, development projects are community-based, but the problems are those faced by individuals within the community. This theory suggests that as individuals within the community improve their lives, the whole community also develops. Projects link individuals' improvements to changes within the broader community. Rubin also suggests a theory of holistic development in which successful projects simultaneously address physical and social community problems. In this model, economic development projects and the creation of jobs are linked with social change and education.

Proposed Integrated Framework

Developing an adequate definition and a comprehensive theoretical framework for quality of life research will improve the effectiveness of the study design. Studies of tourism and quality of life in the host community should address both objective and subjective components and should include aspects of individual and community scales. Figure 1 illustrates a community quality of life framework that incorporates the aspects of research design that have been explored in this review.

The framework starts with the implementation of a community development project (in this case it is tourism-based). That project, along with forces external to the

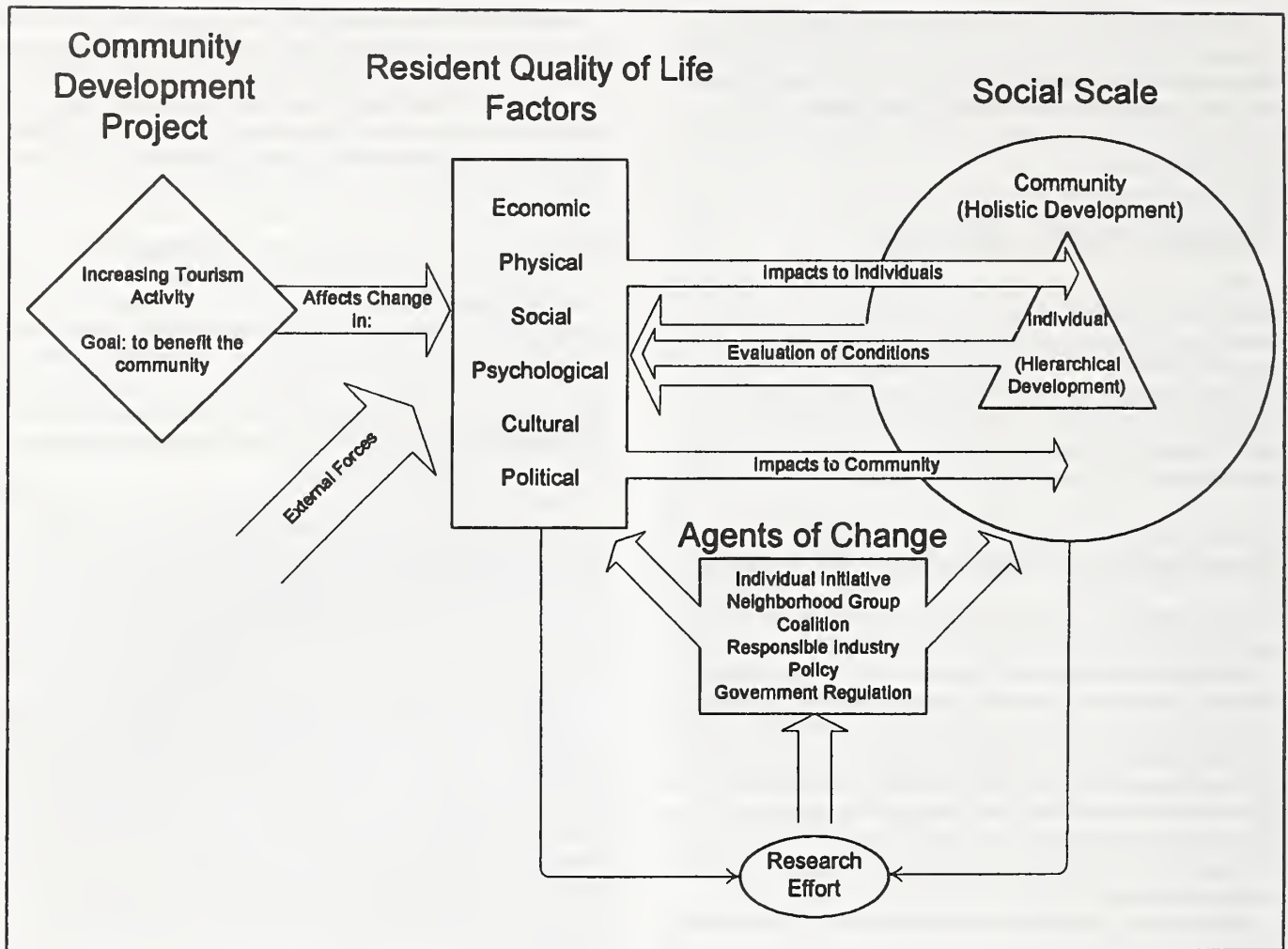


Figure 1—Community quality of life framework.

project, affect change in factors of quality of life. The changes cause varying impacts at different social scales. The impacts are evaluated by individuals within the context of the relevant social scale. How people perceive the impacts is tempered by the scale of reference of the individual. This process of impact and evaluation is ongoing and dynamic.

The framework suggests that individuals may not be aware of the exact causes of changes in quality of life; the effects of project development are difficult to separate from the effects of externalities. Research is directed at monitoring the condition of quality of life factors and the evaluation of those conditions. The results of research are then directed toward agents of change in the community.

In figure 1, the agents of change are listed in order from individual initiative to government regulation. The order is important because principles of sustainable development would suggest that appropriate solutions are applied at the lowest possible social scale (Milbrath 1979; Rubin 1994; Simon 1989). However, the tourism industry should also be a leader in protecting and enhancing resident quality of life through responsible business practices. Ritchie (1987)

concluded that appropriate marketing and development practices by private businesses can contribute greatly toward protecting host quality of life and sustaining the tourism industry.

Research Design

Figure 2 illustrates the steps involved in conducting research based on the proposed framework. A study starts with exploratory open-ended interviews with community leaders and citizen group representatives. This approach helps to identify the salient issues and the scale to which they apply. This step is followed by the identification of social indicators that appropriately reflect the condition of salient quality of life attributes. Next, survey research is implemented along with analysis of social indicators to identify the baseline situation. The surveys include opinion and attitude scales about the importance of issues and perceived conditions of present quality of life factors. In addition, surveys can collect sociodemographic information that will help identify the type of respondents and their

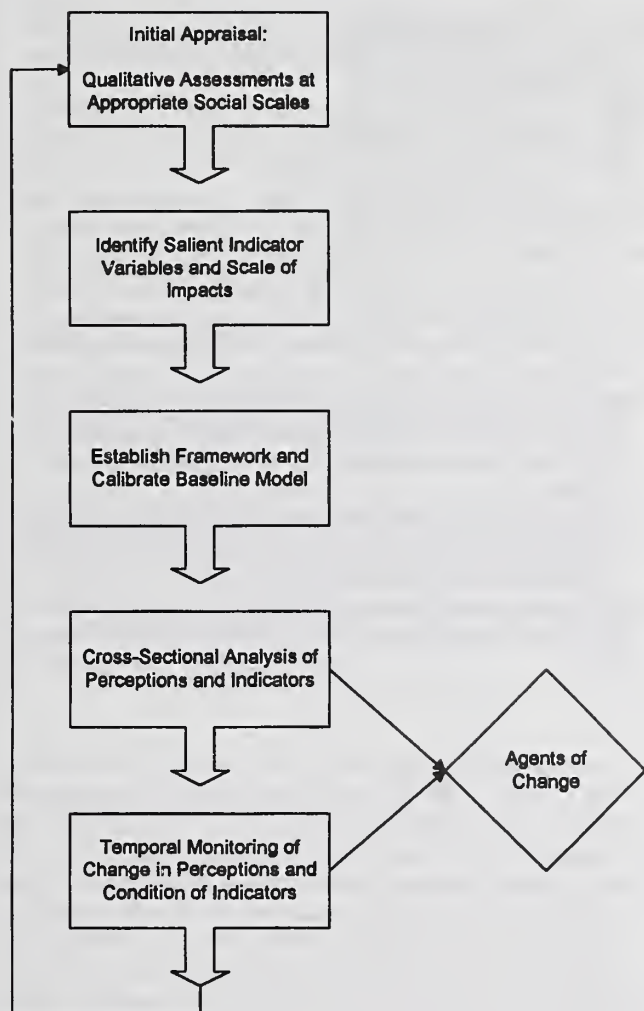


Figure 2—Quality of life research effort.

scale of reference on particular issues. Along with the use of surveys to establish a baseline, social indicators are compared across communities or groups of individuals to suggest current strong points and weaknesses relative to other communities. A final step is to design and implement a monitoring program.

Temporal monitoring should be a major component of tourism and quality of life research. Monitoring increases the strength of the study design by providing several benefits, including the ability to detect seasonal variations, to identify trends that may suggest future impacts, and to assess the effects of policy changes. The monitoring component should track changes in the levels of tourism as well as changes in community quality of life conditions.

In addition to ongoing analysis of social indicators and visitor volumes, monitoring efforts should include a periodic collection of perceptual data to detect changes in attitudes and opinions. This qualitative monitoring could be thought of as "recalibration" of the study model concerning the relationship between tourism and quality of life.

Application of Proposed Framework in Research Design

One of the most important uses of quality of life research is to tie study findings to community agents of change, such as citizen involvement, private business practices, and public policy development. Citizen involvement is an especially important force in tourism because tourism is a community-based development strategy often initiated by the public.

Quality of life is a local experience, suggesting that policies and initiatives should focus on change within the boundaries of the local community. When developing strategies, consideration should be given to the appropriate scale for addressing the particular problem. The impacts may be more appropriately addressed by private initiative unless the threats to community quality of life are large enough to require concerted societal action (Milbrath 1979).

Conclusions

Future research should include both subjective and objective components to provide a complete understanding of the dynamic conditions of quality of life. Studies should also address the various scales at which quality of life factors are measured and affected. Appropriate designs should develop a theoretical basis to guide the research in understanding the relevant aspects of quality of life and the saliency of those features in a given situation.

Improved quality of life research design will provide greater understanding of complex social issues, allowing community leaders to identify policies and develop strategies that better meet local needs. While the determination of cause-and-effect relationships has not been emphasized in this proposed research process, it is in the interest of a responsible tourism industry to proactively address emerging host community quality of life issues, regardless of cause. Appropriate development strategies integrated with a holistic approach to quality of life in the host community will contribute to greater sustainability of the tourism industry.

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Montanans' Attitudes and Behavioral Intentions Toward Tourism: Implications for Sustainability

Steven R. Martin

Abstract—Residents' attitudes and behavioral intentions may indicate support or opposition toward the tourism industry, with direct implications for the sustainability of the industry at the local level. This study found that Montanans distinguish among four aspects of tourism, benefits, negative impacts, equity between tourists and residents, and economic rewards. A cluster analysis grouped respondents into four segments based on their attitudes, into three segments based on behavioral intentions, and into four groups based on attitudes toward additional tourism. Most respondents indicated passive behavioral intentions. Support for the current level of tourism appears strong, but there is less support for additional tourism.

Montana and other rural states need tourism to help strengthen their economies. Money is being spent to promote tourism, but tourism sustainability is an increasing concern. With careful development and proper management, rural tourism can be a useful economic development strategy, but "...ill-conceived and poorly planned tourism development can erode the very qualities of the natural and human environments that attract visitors in the first place" (Inskeep 1991, p. 460). In an effort to avoid the degradation of the environmental and social qualities on which tourism depends, the idea of using these qualities or resources sustainably has captured the attention of tourism planners and economic development specialists across the rural West.

We must ask one basic question. What do we want to sustain? The answer is that we want to sustain a number of qualities.

- We want to sustain residents quality of life.
- We want to sustain the tourism industry, ensuring that tourist revenues enable tourism-dependent businesses to survive and prosper.
- We want to sustain community support for tourism, enabling the industry to play its role and fill its niche in the community and the local economy.
- We want to sustain the quality of the visitor's experience.
- We want to sustain the natural and cultural resources.

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If we fail to sustain any one of the qualities, the others will fail also.

The sustainability of these qualities depends on numerous factors. Although monitoring the sustainability of those qualities may be difficult, the attitudes and behaviors of residents toward tourism may be used as a subjective indicator to measure the quality of life affected by tourism. These attitudes and behaviors may indicate support or opposition toward the tourism industry, with direct implications for the sustainability of the industry. Residents' attitudes and behaviors toward visitors directly affect the quality of the visitor experience, and thereby affect the sustainability of the industry.

This study was designed to assess the attitudes and behavioral intentions of Montana residents toward tourism and will explore the influences on and relationships among attitudes, behavioral intentions, and a number of independent variables. At the time of the study, an accommodations tax on lodging had been in place for 4 years, generating revenue that was used primarily to promote Montana as a tourism destination. By 1991, the success of that promotional effort was becoming apparent. Tourist visitation rose markedly in the 4 years following the start of the lodging tax, from a 7-year (1980 to 1986) prelodging tax average estimate of 4.7 million visits to 6.0 million visits in 1991 (Christensen 1993). Some Montanans began to question the direction of tourism development in Montana and to debate the positive and negative consequences that such development might have for the local residents. We will explore public sentiments about this issue.

Is the current level of tourism in Montana (and is an increase in tourism in Montana), sustainable with respect to host resident attitudes and behavioral intentions? We will discuss whether or not attitudes toward tourism are unidimensional or multidimensional; what attitudes Montanans hold toward tourism; how Montanans might behave relative to tourism; what attitudes Montanans hold toward increased levels of tourism; and what relationships exist between tourism attitudes, behavioral intentions, and attitudes toward additional tourism.

Conceptual Framework

A number of studies have found that the overall attitude of host community residents toward tourism is generally favorable (Liu and Var 1986; Milman and Pizam 1988; Pizam 1978; Rothman 1978; Thomason and others 1979). However, residents often hold a number of unfavorable attitudes toward tourism, such as perceived impacts about traffic congestion, noise, litter, overcrowding of facilities,

increased prices of goods and services, and increased crime. Findings suggest that people do not have a single, unified attitude toward tourism, but they have a number of different attitudes, both favorable and unfavorable.

Attitudes toward tourism appear to be linked to some extent with the level of tourism in the host community. Allen and others (1993) found that residents of communities with low tourism development combined with low overall economic activity, as well as residents of communities with high tourism development combined with high economic activity, had the most favorable attitudes toward tourism. Conversely, residents of communities that were economically successful but had little tourism development, and residents of communities that were less economically successful but had a large tourism presence, had the least favorable attitudes toward tourism.

A number of studies (for example, Long and others 1990) have found that the perceived impacts of tourism (both positive and negative) increase with increasing levels of tourism development, and residents' attitudes toward additional tourism development were initially favorable, becoming less favorable with increasing levels of tourism development. Perdue and others (1990) found that support for additional tourism development was negatively related to the perceived future of the community (that is, people with a negative view of their community's future were likely to support additional tourism, while people with a positive view of their community's future did not support additional tourism).

While a number of these studies differentiated among residents based on the level of tourism development in their community and then compared residents' attitudes across communities, a few studies have segmented residents based on attitudes and then compared those attitude segments. Tourism attitudes in Florida were assessed and used as the basis for segmenting the population into attitude clusters (Davis and others 1988). The respondents in this Florida study were clustered into "Haters" (16 percent of the sample), "Lovers" (20 percent), "Cautious Romantics" (21 percent), "In-Betweeners" (18 percent), and "Love 'Em for a Reason" (26 percent). While 40 percent of the Haters were native-born Floridians, only 16 percent of the Lovers were Florida natives.

Although host resident attitudes toward tourism have been studied for the past 20 years, there have been few studies about the behaviors and behavioral intentions of residents toward tourism. While it has long been intuitively thought that there is a strong and logical relationship between attitudes and behavior, empirical proof has not been available because of the complex nature of this relationship. Therefore, a survey instrument was developed to measure tourism attitudes and their dimensionality, behavioral intentions toward tourism, and attitudes toward additional tourism. Tourism attitude statements from previous studies were used in addition to several new items developed specifically for this study (table 1). Questions on behavioral intentions and statements on attitudes toward additional tourism, were generated and subjected to collegial review (tables 2 and 3). A five-point scale (Strongly Agree to Strongly Disagree for the attitude statements, Very Likely to Very Unlikely for behavioral intentions)

was used as the response format. Two attitude items were also included to measure the perceived future of the respondent's community.

Methods

After pretesting the questionnaire on a sample of 287 households in Teton County, MT, the data were collected by a mail survey. The target population was adult residents who owned a vehicle registered in Montana on July 1, 1991. A sample of 2,000 records was drawn by the Department of Motor Vehicles from their statewide data base of vehicle registrations. Once business registrations were removed, a sample of 1,867 individuals, in approximate proportion to the distribution of the state's population by county, remained.

Survey packets were mailed in August 1991 to those 1,867 individuals. One week after the initial mailing, a reminder postcard was sent to each person. Two weeks later a second questionnaire was sent to nonrespondents. One month later, a third and final survey packet was mailed. After those who had moved out of state were removed from the mailing list, a final sample of 1,734 remained.

This procedure resulted in a total of 1,128 completed and returned questionnaires for a 65 percent response rate. Because females were underrepresented in the sampling frame relative to the true population, this gender bias was corrected by weighting the returned questionnaires by gender so that the final sample reflected the actual proportions of males and females in the adult Montana population (U.S. Department of Commerce 1992).

A check for nonresponse bias was conducted; 100 of the 606 nonrespondents were contacted by telephone. While no significant differences were detected for age, education, length of residence, or attitudes toward tourism, nonrespondents did tend to view themselves as less likely to benefit from tourism than respondents (Martin 1994).

Results

Tourism Attitude Dimensions

To explore the dimensional aspect of attitudes toward tourism, a principal components analysis (with varimax rotation) was performed on the set of 27 attitude statements in table 1. This analysis resulted in four components with eigenvalues greater than 1 (table 4 for items and factor loadings). These components are referred to as tourism attitude dimensions, defining the general aspects of tourism about which people hold consistent attitudes. Montanans appear to hold attitudes toward four aspects of tourism: positive **benefits**, negative **impacts**, perceptions of **equity**, and perceived **extent** and distribution of economic rewards.

For each of the four principal components or attitude dimensions, a scale score was created by adding a subject's responses to the items loading most strongly on that component or dimension. These scale scores or attitude indices summarize each subject's attitude toward that dimension.

Table 1—Statements used to measure attitudes toward tourism (grouped according to results of principal components analysis).

Tourism is responsible for too fast a rate of **urbanization** and development in Montana.

Tourists **disrupt** the peace and tranquility of our public parks.

Tourists are a **burden** on my community's services.

In recent years, the state is becoming **overcrowded** because of more tourists.

Tourists add greatly to the **traffic** problems in my community.

The more Montana is **discovered** by tourists, the harder it is for Montanans to find uncrowded places to recreate.

An increase in tourists in my community will lead to **friction** between local residents and tourists.

Tourism has increased the number of **crime** problems in my community.

The **environmental** impacts resulting from tourism are relatively minor.

My community should take steps to **restrict** tourism development.

Tourists **crowd out** local residents in many good hunting and fishing spots.

The local residents are the ones who really **suffer** from living in an area popular with tourists.

Tourism is one of the **brightest** spots in Montana's economic future.

Tourism holds great **promise** for Montana's future.

The tourism industry provides many **worthwhile** employment opportunities for Montana residents.

The overall **benefits** of tourism outweigh the negative impacts.

Tourism encourages a variety of **cultural** activities by the local population (such as arts, music, crafts, etc.).

The **quality** of life in my community has improved because of tourism.

Tourism **attracts** more spending and investment in Montana's economy.

Because of tourism, there are more **parks** and other recreational areas and facilities that local residents can use.

Tourists should be **taxed** more than local citizens for the services they use.

It's okay to **charge** tourists more for things than locals pay.

Tourists do not pay their "**fair share**" for the services communities provide them.

The problem with tourism is that most of the jobs in the tourism industry are **low paying**.

Our household **standard** of living is higher because of money that tourists spend here.

Only a small **minority** of Montanans benefit economically from tourism.

Most of the money **earned** from tourism ends up going to out-of-state companies.

The first attitude dimension (Impacts) contains 12 statements about the potential negative aspects of tourism and its effect on local residents. Nearly 78 percent of respondents hold a favorable attitude toward this dimension (that is, they disagree that tourism has led to these negative impacts).

The second attitude dimension (Benefits) comprises eight statements about the positive effects of tourism on Montanans' quality of life. A large majority of respondents (85 percent) hold a favorable attitude toward this dimension of tourism (that is, they agree that tourism has led to these benefits).

The third attitude dimension (Equity) comprises three statements about equity between tourists and residents.

Nearly 66 percent of respondents hold a favorable attitude toward this dimension (that is, they disagree that the issue of equity is a problem).

The fourth attitude dimension contains four statements about the perceived Extent and distribution of tourism's economic rewards. Just over 40 percent of the respondents hold a favorable attitude toward this dimension, and 45 percent hold an unfavorable attitude. Nearly 15 percent scored exactly midpoint of the scale.

Attitude Clusters

To segment the resident population and their attitudes toward tourism, a cluster analysis (using SPSS-PC, Norusis 1988) was performed based on the four attitude indices described above. The number of requested clusters was increased over successive analyses until the smallest cluster was deemed too small to be meaningful and qualitative differences between clusters were difficult to detect. This procedure resulted in acceptance of the four-cluster solution.

The cluster analysis segmented respondents into those who hold favorable attitudes toward all four tourism attitude dimensions (Positivists, 59 percent), those who hold mixed but predominantly favorable attitudes (Mixed Positive, 22 percent), those who hold mixed but predominantly unfavorable attitudes (Mixed Negative, 6 percent), and those who hold uniformly unfavorable attitudes (Negativists, 13 percent).

Table 5 displays selected social demographic information for each of the four attitude clusters. The most pronounced difference among clusters relates to gender; the Negativist and Mixed Negative clusters are 59 percent and 68 percent males, while women make up the majority (53 percent) of the Positivist cluster. It is also worth noting that the mean county per capita accommodations tax revenue for Negativists was \$9.30, compared with \$7.40 for the Positivists. In other words, more Negativists than Positivists lived in counties with high levels of per capita tourism activity. Unlike the Davis and others (1988) Florida

Table 2—Questions used to measure behavioral intentions.

How likely or unlikely is it that you would:

- recommend a good place to hike, fish, picnic, pick berries, etc. to a tourist if asked?
 - write a letter to your newspaper opposing a tourism development project in your community?
 - speak in favor of a tourism development project at your city council meeting?
 - speak to or write a letter to your state legislator opposing a tourism development project in your community?
 - be willing to serve on a tourism advisory board in your community to help plan tourism promotion and development?
 - vote against a local resort tax on items such as hotel rooms and restaurant meals?
 - be willing to volunteer 4 hours each month to help improve the appearance of your community to make it more attractive to tourists?
 - vote against a state legislator who wanted to emphasize tourism development in Montana?
 - write a letter to your newspaper supporting a tourism development project in your community?
 - speak against a tourism development project at your city council meeting?
 - speak to or write a letter to your state legislator supporting a tourism development project in your community?
-

Table 3—Statements used to measure attitudes toward additional tourism.

-
- If tourism increases in Montana, the overall quality of life for Montana residents will improve.
 - If tourism increases it could hinder traditional Montana industries such as timber, mining, and agriculture.
 - If tourism increases, it will be expensive to deal with the resulting environmental impacts.
 - If tourism increases it will mean more jobs and a better economy for Montana.
 - If tourism increases, residents will end up having to pay more for everyday goods and services.
 - If tourism increases, high paying jobs in the lumber mills and mining operations may be threatened.
 - The state should do all it can to try and attract more tourists.
 - If tourism increases, Montanans will end up paying higher taxes to pay for the services tourists need.
 - If tourism increases it will lead to Montana becoming overdeveloped.
 - Tourism looks like the best way to help my community's economy in the future.
-

study, there was little difference in the proportions of Negativists and Positivists who were native Montanans.

Behavioral Intention Clusters

In an attempt to move one step beyond the measurement of attitudes toward tourism, this study next measured respondents' behavioral intentions toward tourism. Behavioral intention questions were used to measure how likely or unlikely it was that respondents would perform a particular behavior that either supported or opposed tourism in their community (table 2).

A cluster analysis was performed to segment respondents on the basis of their responses to these behavioral intention items. This analysis resulted in three clusters, the Supporters (34 percent), the Opposers (8 percent), and the Passivists (58 percent). The Supporters indicated that it

was likely or very likely they would perform each of the behaviors supporting tourism and that it was unlikely or very unlikely they would perform any of the behaviors opposing tourism; the Opposers indicated the opposite. The Passivists indicated it was unlikely or very unlikely they would perform any of the behaviors.

Attitudes Toward Additional Tourism

Finally, a cluster analysis was performed to segment subjects on the basis of their responses to the "additional tourism" attitude statements (table 3). This analysis resulted in four clusters, the Negativists (15 percent), the Mixed/Pro-Economic group (8 percent), the Uncertains (53 percent), and the Positivists (24 percent). The Mixed/Pro-Economic group held favorable attitudes toward the economic consequences of additional tourism, but unfavorable

Table 4—Principal components factor loadings (varimax rotation) of 0.4 and greater for tourism attitude statements in table 1. All factors have eigen values >1; cumulative proportion of variance explained by factors = 0.554.

Variable ¹	Factor 1 (Impacts)	Factor 2 (Benefits)	Factor 3 (Equity)	Factor 4 (Extent)
Urbanization	0.685			
Disrupt	.675			
Burden	.663			
Overcrowded	.653			
Traffic	.640			
Discover	.627			
Friction	.619	0.435		
Crime	.601			
Environment	.581			
Restrict	.560	.503		
Crowd out	.560			
Suffer	.549	.430		
Bright		.782		
Promise		.777		
Worth		.707		
Overall	.438	.675		
Cultural		.668		
Quality		.666		
Attracts		.642		
Parks		.441		
Taxed			0.845	
Charge			.836	
Fair share			.678	
Low pay				0.730
Standard				.554
Minority		.569		.469
Earned				.451
Cronbach's Alpha	.88	.90	.79	.64

¹Variable names are keyed to attitude statements in table 1.

attitudes toward other (social and environmental) consequences. The Uncertains scored almost exactly midpoint of the scale for every one of the "additional tourism" attitude statements.

Relationships Among Tourism Attitudes, Behavioral Intentions, and Attitudes Toward Additional Tourism

To explore the relationship between tourism attitudes and behavioral intentions, attitude clusters were cross-tabulated with behavioral intention clusters (table 6). Regardless of attitude, the majority of respondents appear unlikely to perform any of the behaviors posed in the questionnaire. However, those with mixed attitudes are slightly less likely to act than those with more definite attitudes; and those with favorable attitudes are slightly more likely to translate their attitudes into behavioral intentions than those with unfavorable attitudes.

Although none of the respondents in the Positive or Mixed Positive attitude clusters indicated that they might actively oppose tourism efforts, 7 percent of respondents in the Negative and 10 percent in Mixed Negative attitude

clusters indicated that they might actively support tourism efforts.

Next, clusters based on attitudes toward additional tourism were cross-tabulated with behavioral intention clusters (table 7). Respondents who were uncertain about the consequences of additional tourism were the most likely (70 percent) of the four groups to be passive. This seems intuitive because the nature of their attitudes suggests that they would not be sure whether to support or oppose tourism efforts. The Uncertains who were not Passivists, however, were much more likely to be Supporters than Opposers (26 to 3 percent).

The data also indicate that people with uniformly favorable attitudes toward additional tourism, and those with mixed but proeconomic attitudes, are the least likely to be passive. A majority of respondents in both of these groups (59 and 61 percent) indicated that they would likely be active supporters of tourism.

Finally, clusters based on attitudes toward current levels of tourism were cross-tabulated with clusters based on attitudes toward additional tourism (table 8). Respondents with unfavorable attitudes toward current levels of tourism (Negativists and Mixed Negative) are much less likely to be uncertain about the consequences of additional tourism (22 and 34 percent), and they are much more likely to hold uniformly unfavorable attitudes toward tourism increases (69 and 66 percent). Conversely, people with favorable attitudes toward current levels of tourism (Positivists and Mixed Positive) are much more likely to be uncertain about the consequences of additional tourism (55 and 58 percent), and they are much less likely to hold uniformly positive attitudes toward tourism increases (33 and 28 percent). In other words, people with negative attitudes about tourism have negative attitudes about additional tourism, but people with positive attitudes about tourism are uncertain about additional tourism.

To see if support for (or at least attitudes toward) additional tourism is related to the perceived future of the respondent's community, the mean score for the "perceived community future" scale (the sum of the two attitude items on community future) was calculated for each for the four "additional tourism" attitude clusters. A one-way ANOVA resulted in an F-ratio of 5.80 (prob. = 0.0006), and a Duncan's multiple range test (with significance level 0.05) found that respondents in the "Additional" Negativists cluster perceived the future of their communities as significantly more bleak than respondents in the other three clusters.

Discussion

We have demonstrated (along with Liu and others 1987; Perdue and others 1990) that attitudes toward the consequences of tourism are multidimensional. This multidimensionality of attitudes toward tourism suggests that when industry or policymakers consider attitudes toward tourism, they must recognize that residents do not have a single, universal attitude. People are able to understand the positive benefits, the negative impacts, the feelings of equity (or inequity) between tourists and residents, and the perceptions about the extent and distribution of tourism's economic rewards.

Table 5—Selected social demographic information for respondents in each attitude cluster.

	Entire sample n = 1,117	Negative n = 99	Mixed negative n = 41	Mixed positive n = 167	Positive n = 44
Native Montanan (percent)	56	57	54	57	54
Mean years lived in Montana	36	35	36	32	37
Mean years in present community	26	26	29	22	25
Median age	46	43	47	43	46
Male/female (percent)	50/50	59/41	68/32	52/48	47/53
College graduate (percent)	28	28	35	33	29
Mean population of home county (in 1,000's)	48	51	46	58	48
Accommodations tax revenue per capita of home county (mean \$) ¹	\$7.70	\$9.30	\$7.80	\$8.40	\$7.40

¹A measure of tourism activity adjusted for county population; range for entire sample (54 counties) is 0 to 20.5.

Table 6—Cross-tabulation of respondents by tourism attitude and behavioral intention clusters, in column percent.

Behavioral intention clusters	Tourism attitude clusters			
	Negativists n = 99	Mixed negative n = 41	Mixed positive n = 167	Positivists n = 445
Opposers	35	25	1	2
Passivists	58	65	60	54
Supporters	7	10	39	44
Total	100	100	100	100

Table 7—Cross-tabulation of respondents by additional tourism attitude clusters and behavioral intention clusters, in column percent.

Behavioral intention clusters	Additional tourism attitude clusters			
	Additional negativists n = 161	Mixed/pro economic n = 88	Uncertain n = 565	Additional positivists n = 264
Opposers	40	2	3	0
Passivists	55	37	70	41
Supporters	4	61	26	59
Total	100	100	100	100

Certain actions or policies that affect one of these attitude dimensions may not be relevant to the others. For example, efforts to increase public support for tourism activities by highlighting its economic benefits may have less than the desired effect if people remain convinced of the negative social or environmental impacts, or if there are inequities between tourists and residents who are paying for community infrastructure needs.

The attitude dimensions are, for the most part, intuitive. But the Equity dimension appears to behave differently. When respondents were segmented on the basis of their attitudes toward the four tourism dimensions, they grouped into four clusters. Two of these clusters represent the end-points of the positive-negative tourism attitude spectrum—those with attitudes uniformly favorable toward tourism, and those with uniformly unfavorable attitudes. But the remaining two clusters, occupying the middle ground of the spectrum, differed from their respective endpoints only in their attitudes toward the Equity dimension. The Mixed Negative group held unfavorable attitudes toward all dimensions except Equity, while the Mixed Positive group held favorable attitudes toward all dimensions except Equity. Additional analyses not reported here also point to the atypical or unpredictable nature of attitudes toward the Equity dimension.

Equity is a powerful psychological construct. As Ap (1992) points out, reciprocity is perhaps the construct most central to social exchange theory. When two actors or groups of actors enter into an exchange, each expects to receive benefits equivalent in value to what they give. If residents participate in an exchange with tourists and other tourism actors (for example, operators) by offering friendliness,

Table 8—Cross-tabulation of respondents by tourism attitude and additional tourism attitude, in column percent.

Additional tourism clusters	Tourism attitude clusters			
	Negativists n = 99	Mixed negative n = 41	Mixed positive n = 167	Positivists n = 445
Additional negativists	69	66	2	4
Mixed/pro economic	8	0	12	8
Uncertain	22	34	58	55
Additional positivists	1	0	28	33
Total	100	100	100	100

courtesy, and hospitality, by tolerating inconveniences caused by tourism (for example, traffic congestion and shared recreational resources), and by shouldering costs for community infrastructures needed by the tourism industry, they expect to receive an equitable return (for example, job opportunities, increased recreational and cultural opportunities). As Ap points out in his propositions, if this exchange is perceived as equitable, residents will perceive tourism's consequences positively. But if residents feel they are not receiving benefits equal in value to their costs, they are likely to have negative perceptions of tourism. Residents may express their dissatisfaction through behaviors such as overcharging, rudeness, indifference, poor service, and even hostility (see Ap 1992).

The issue of equity between tourists and residents may cause the friction that often exists between these groups and thus affect the issue of sustainability. If a perceived inequity between tourists and residents erodes community support for tourism or leads to opposition to tourism, then certainly the sustainability of the industry on that level is threatened. Likewise, negative behaviors of residents toward tourists that result from perceived inequities could threaten the sustainability of quality visitor experiences, and thus threaten the sustainability of the industry at the local level. If the results of this study are any indication, understanding and addressing the issue of equity between residents and tourists may be difficult because there appears to be little logic to respondents' attitudes toward this dimension.

Regardless of the difficulty in understanding the nature of attitudes toward equity, attitudes and behavioral intentions toward the current level of tourism are generally favorable (positive attitudes and passive or supportive behavioral intentions), suggesting that the current level of tourism is likely sustainable. However, when asked about the possible consequences of additional tourism, attitudes become more cautious. Those who already hold unfavorable attitudes about the current level of tourism become more negative, and those with favorable attitudes toward the current level of tourism display uncertainty about the consequences of additional tourism. This indicates that higher levels of tourism may not be sustainable from the standpoint of community support.

Previous research has found that attitudes toward and perceived impacts of tourism are related to the level of tourism in the host community, and this study produced the same results. The mean county per capita accommodations tax revenue for Negativists was significantly higher than that of Positivists (Duncan's multiple range test at significance level 0.05), suggesting that certain counties heavily dependent on tourism may have exceeded some threshold beyond which attitudes become uniformly negative.

It is also interesting to note that the group with the next highest per capita lodging tax revenue was the Mixed Positive cluster (whose only negative attitude was toward Equity), but the Mixed Negative group (whose only positive attitude was toward Equity) had a mean per capita lodging tax revenue closer to that of the Positivists. This suggests that attitudes toward issues of equity are perhaps the most sensitive to levels of tourism in a community, and that as the level of tourism increases, attitudes toward issues of equity may be the first to turn negative.

Just as the population may be segmented based on attitudes, it can also be segmented based on behavioral intentions. Montanans clustered into three behavioral intention segments, those with uniformly supportive behavioral intentions, those with uniformly opposing behavioral intentions, and those who appear unlikely to take action in either direction. The majority of the sample were categorized as passive, but a larger proportion indicated likely support than indicated likely opposition.

As attitude-behavior researchers and theorists have pointed out (for example, Tesser and Shaffer 1990), behavior is not always consistent with attitude. Any number of mediating or intervening variables could contribute to this apparent contradiction. For example, the data in table 6 show that 7 and 10 percent of respondents in the Negative and Mixed Negative attitude clusters indicated that they might actively support tourism efforts. This may be the result of just such a mediating influence, for example, people who have negative attitudes toward tourism, but support tourism efforts because they are in a position to benefit financially from tourism successes.

Likewise, it is interesting to note that of the four "additional tourism" attitude clusters shown in table 7, it is the Mixed cluster (those with negative attitudes toward the social and environmental consequences, but positive attitudes toward the economic consequences of additional tourism) that are the most likely to be tourism supporters. This suggests that the potential monetary rewards from tourism may be more important in influencing behavior than are attitudes toward other aspects of tourism. The Love 'Em for a Reason cluster described by Davis and others (1988) also approved of the tourism industry because of the economic benefits it generated.

When behavioral intention clusters were cross-tabulated with attitude clusters toward the current level of tourism (table 6), the majority of each attitude cluster was categorized as Passivists. But when behavioral intention clusters were cross-tabulated with clusters based on attitudes toward additional tourism (table 7), the proportion of Positivists who said they would support tourism increased from 44 to 59 percent, and the proportion of Negativists

who said they would oppose tourism likewise increased from 35 to 40 percent. This suggests that if attitudes toward additional tourism are crystallized (in either direction), residents are less likely to be behaviorally passive and more likely to actively support or oppose tourism. If attitudes toward additional tourism are uncertain, residents are more likely to be passive.

Residents' attitudes toward additional tourism and its consequences may be more influential in motivating them to act than their attitudes toward the current level of tourism. If the status quo is maintained, there is no felt need to act; but when faced with increasing tourism, attitudes appear to become more extreme, and behavioral intentions become less passive and more active. The data in table 8 further support the idea that even the people who feel the current level of tourism is sustainable and that it is providing more positive than negative consequences are unsure that higher levels of tourism can be sustained. Note the shift of Positivists and Mixed Positive respondents out of the group that supports additional tourism and into the group that is uncertain.

While previous research found that support for additional tourism was negatively related to perceived community future (for example, a perceived bleak community future translated into support for additional tourism), we found the opposite to be true. Respondents with unfavorable attitudes toward additional tourism perceived the future of their communities as significantly more bleak than respondents in the other three clusters. Montanans living in small, rural towns with declining economies and uncertain futures may prefer to "tough it out" and try to preserve their current lifestyle rather than risk opening their towns up to the seemingly uncontrollable forces of tourism. Conversely, people who perceived promising futures for their communities had favorable, mixed, or uncertain attitudes toward additional tourism; they saw tourism as contributing to, or at least not detracting from, the bright futures of their communities.

Conclusions

The evidence suggests that based on 1991 attitudes and behavioral intentions, support for tourism in Montana at its 1991 level is more likely than opposition. Residents appear guarded in their attitudes toward additional tourism, however, and there is less support. Many residents who have favorable attitudes about the current level of tourism appear uncertain about the consequences and desirability of additional tourism. At the same time, some residents with negative attitudes but passive behavioral intentions regarding the current level of tourism appear likely to translate their negative attitudes toward additional tourism into active opposition.

To the extent that the sustainability of tourism depends on residents' attitudes and behavioral intentions, the tourism industry in Montana should be cautious that it does not expand beyond the level at which those attitudes

toward additional tourism are translated into active opposition. Furthermore, future research that focuses on issues of equity and on actual behaviors of residents toward tourists and tourism development will further our understanding of the role that residents' attitudes and behaviors play in sustaining the quality of visitor experiences and the tourism industry.

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Environmental Consequences of Tourism: A Review of Recent Research

Kathleen L. Andereck

Abstract—Recent research has largely concentrated on the negative impacts tourism has on natural resources, including effects on water and air resources, plant and animal resources, soil and dune erosion, and aesthetics. Tourism has some positive influences on the environment including preservation of natural areas worldwide due to tourism and its associated economic benefits. However, most research has been reactionary, looking at tourism after damage has taken place, with no preimpact measurements available to document the extent of environmental change. No comprehensive conceptual framework exists on which research can be based.

The ultimate foundation for any type of tourism development and activity is the natural resource base of an area. Tourism is often considered an environmentally friendly industry. Relative to many resource extraction industries this may be true; however, the environmental impacts of tourism cannot be overlooked. Tourism development is frequently located in areas known for attractive environments, some of which are sensitive to human influences. As a result, the development required to meet the needs of tourists and the resulting tourism activity inevitably impact the physical resource.

Recent research has recognized the potential destructive influences of tourism on the environment and acknowledged the possible detrimental consequences for the industry. Tourism cannot be sustained if the quality of the physical environment is no longer attractive to tourists. Ultimately, environmentally insensitive tourism can deplete the very resources upon which it is dependent. Thus, identifying and understanding the types of environmental impacts associated with tourism development and activity is critical to the formation and growth of a sustainable tourism industry in any area.

This paper reviews the past 10 years of research on the environmental impacts of tourism. Because a large and widely dispersed amount of literature addressing this topic has been published in recent years, this review has generally been limited to journal publications that specifically address tourism impacts. It is also intended to provide insight into the environmental impact issues recently considered rather than to provide a comprehensive review of all pertinent literature.

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Tourism's Negative Environmental Impact

The two types of tourism impacts are those associated with tourists and those occurring as a result of infrastructure development. The most intense impacts occur in destination areas, around service centers, and along transportation routes. Tourism often has negative environmental impacts because it frequently occurs in environmentally sensitive locations, such as beach areas and water fronts, mountains, and areas with spectacular geological features (May 1991).

Pollution

Tourism is thought to be a "clean" industry without the pollution problems associated with other types of economic development. However, tourism contributes to some types of pollution that have been considered in recent publications. The majority of pollution problems are related to traffic, tourism development, and the activities of tourists (Hamele 1988).

Air—Air pollution is a result of emissions from vehicles and airplanes. Although tourism likely accounts for little of the overall emissions problem, the recent issues of ozone destruction, the greenhouse effect, and global warming make tourism-related air pollution a concern (Wheatcroft 1991).

Most tourism-related air pollution stems from vehicle traffic (Hamele 1988). In rural areas air pollution as a result of tourism is minimal, but in congested areas, emissions harm vegetation, soil, and visibility. On the island of Jersey in the English Channel, for example, the number of cars increases from less than 250 to over 2,500 during the summer peak season, resulting in high levels of emissions and the associated impacts (Romeril 1985).

Although only 1 percent of tourism-related air pollution is attributed to air travel, airlines are concerned, are aware of the need to reduce emissions, and have been working to do so (Wheatcroft 1991). Finally, heating systems of tourist-related buildings emit some polluting substances, but this is minimal relative to vehicle emissions (Hamele 1988).

Water—Water resources are a prime attraction for tourism and recreational developments and frequently suffer impacts. Water pollution is a result of waste water generated by tourist facilities and runoff. Water pollution occurs on inland lakes and streams and in the marine environment. Much of this is nonpoint pollution such as septic tank seepage, lawn fertilizer, road oil, and runoff from

disturbed soil (Gartner 1987; Rodriguez 1987). Extra nutrients in the water system cause eutrophication and loss of transparency of lakes and streams, which in turn influences other aquatic life. Lakes choked with weeds and beaches with algae, a process accelerated by human influence, have become common in some areas (Gartner 1987). Some, such as Lake Tahoe, are in the initial stages of eutrophication and transparency loss (Goldman 1989); others are much further along. Inadequately treated effluent or raw sewage discharged into water resources is a health hazard. This type of pollution is an increasingly serious problem in some areas such as the Mediterranean (Mathieson and Wall 1982). Karan and Mather (1985) reported wastewater problems associated with a resort hotel near Mount Everest.

Another impact associated with tourism is sedimentation, caused by erosion, which is related to deforestation and plant destruction. Such sedimentation is an especially large problem when tourist facilities are being constructed. Sedimentation reduces the clarity of water and has resultant impacts on aquatic life. For example, development around Lake Tahoe has resulted in increased sedimentation and algal blooms (Goldman 1989). It can also fill in lakes and reservoirs over an extensive period.

In addition to pollution problems, tourism requires above-average quantities of water for washing, swimming pools, lawn water, and other uses. This is a particular problem in areas where fresh water is scarce (Hamele 1988).

Solid Waste—The tourism industry produces large quantities of waste products. Hotels, airlines, attractions, and other related businesses that serve tourists throw away tons of garbage a year. The problem seems to be particularly troublesome in Third World countries with less sophisticated solid waste management programs and technologies. Much is dealt with through open air incineration or poorly managed composting. Exposed waste is not only aesthetically displeasing but is also a health hazard (Olokesusi 1990).

Use of recyclable and reusable products, and reclamation processes need to be instituted throughout the industry (Wheatcroft 1991). Some companies are attempting to eliminate waste. For example, USAir recycles aluminum cans, donating proceeds to the Nature Conservancy and to National Public Radio for environmental education purposes (Wheatcroft 1991).

A related solid waste problem is the litter tourists often leave behind. Even human waste in areas where toilet facilities are nonexistent is becoming a problem (Boo 1990).

Flora And Fauna

Wildlife—Even though in recent years wildlife-oriented tourism has increased (Vickerman 1988), our understanding of tourism effects on wildlife is limited. Most research looking at the impact of tourism on wildlife has generally focused on a limited number of larger mammals and birds in natural environments. Research does suggest that tourism affects wildlife in numerous ways. Development is increasingly encroaching on the habitats of numerous types of animals. For some species, parks and preserves are now the only sanctuary. Unfortunately, for species that require

large territories or engage in migratory behaviors, these relatively small areas of protected land are not enough.

The impact of consumptive activities, such as hunting and trapping, are obvious. The destruction of wildlife for souvenirs, such as elephant tusks and lion-claw necklaces, results from poaching. This is a major threat to wildlife, especially in Africa (Mathieson and Wall 1982; Olokesusi 1990).

Even nonconsumptive activities such as observation and photography impact wildlife. The presence of tourists disturbs behavior among animals (Kovacs and Innes 1990; Olokesusi 1990). Changes or disruption in behaviors include predatory and feeding activities, breeding (Edwards 1987), mother-offspring interaction (Kovacs and Innes 1990), and other behaviors.

Marine wildlife has also been seriously impacted by tourism in some areas. Disposing of waste into the marine environment, either from point sources or nonpoint runoff, is detrimental to sea life, especially when waste is toxic (Miller 1987). The composition and number of marine life species can also be impacted by beach visitors taking and trampling organisms (Ghazanshahi and others 1983). Wildlife on coral reefs has been damaged and destroyed by trampling from scuba divers; boat anchors, chains, and discharge of refuse (including cruise ships); and reef walking at low tide. Divers who over-collect and hunt for both personal and commercial purposes (to sell as souvenirs) have negatively impacted reef wildlife (Boo 1990; Salm 1985, 1986). Salm (1985, 1986) reported evidence of these impacts, as well as anchor and chain damage, and waste discharge by dive boats and cruise ships. The behavior of whales seems to have been impacted by whale-watching tours in some areas (Beach and Weinrich 1989; Tilt 1987), and sea turtle nesting females and hatchlings have been disrupted by beach activities and development (Prunier and others 1993).

Notably, tourists' behavior affects the extent of impact on wildlife. For example, groups that made modest attempts to minimize disturbance, such as walking calmly and slowly into areas containing wildlife, in this case harp seals, had discernibly less impact (Kovacs and Innes 1990). Kovacs and Innes (1990) suggested that tourists may have less impact on wildlife if tourists are restricted during certain periods (such as birthing seasons) and are educated about appropriate behavior toward wildlife.

Plant Life—Vegetation frequently serves as an attraction for tourists, notably the redwoods of California and spruce trees of the Black Hills (Mathieson and Wall 1982). Development causes some impacts on plant life because construction necessitates the removal of plant life. Thus, the benefits of vegetative cover, such as moisture retention and erosion prevention, are negated (Olokesusi 1990). Deforestation, in an effort to provide for the needs of tourists, results in mudslides, flooding, and avalanches. In several instances, deforestation to provide ski areas for tourists resulted in substantial mudslide damage to villages in Switzerland and Austria, thus causing impacts beyond the environmental damage (Simons 1988). Deforestation and plant removal has also resulted from the collection of firewood in some areas (Boo 1990) including the Mount Everest region (Karan and Mather 1985), over-collecting of some species in certain areas, and forest fires (Mathieson and Wall 1982).

Trampling of vegetation by tourists on foot, on horses, in off-road vehicles, and during camping occurs in woodlands, grasslands, on cliff tops, on beach dunes, and on rocky beaches (Edwards 1987; Ghazanshahi and others 1983; Karan and Mather 1985). After trampling destroys plant life, erosion of paths and sand dune "blow outs" follow (Edwards 1987). The result may be several ecological problems, such as the alteration of species composition and changes in ecological succession.

Species composition and diversity is often altered by tourism development and activities. Pignatti (1993) reported a decrease in natural plant species number and diversity in the presence of a ski lift. Dickson and others (1987), in a study in Teide National Park in Spain, found changes in species composition due to the unintentional introduction of exotics by visitors carrying seeds on shoes and clothing.

Wetlands—Wetlands and estuaries have been destroyed or damaged due to tourism development such as access roads, parking lots, airports, resorts, marinas, sewage treatment plants, recreational facilities, and insect control (Bacon 1987). Because wetlands are rich in plant and animal life, not only have the wetlands themselves been destroyed, but so has the habitat. Many acres of wetlands have been drained and developed in the Caribbean (Bacon 1987). Martinez-Taberner and others (1990) reported extensive changes in the evolutionary processes of areas on the Mediterranean coast as a result of wetland drainage for tourism development. Major changes occurred in the Lake Tahoe ecosystem as a result of wetland drainage (Goldman 1989).

Soil and Beaches

Much of the world's population and economic activity, including tourism, is concentrated on coastal areas (Farrell 1986). Much of tourism's impact on soil and beach resources is related to the impacts previously discussed. De-vegetation causes erosion problems with soils and beaches. Other impacts result from compaction by feet, horses, skis, and vehicles. Pollution occurs from oil and lead from car exhaust (Hamele 1988).

Tourism and recreation add to impacts on coastal areas already stressed from other types of development such as oil refining. Negative effects include destruction of dunes due to excavation, habitat destruction, water pollution, and impacts on aesthetics (Witt 1991). Indigenous species can be endangered or eliminated in favor of exotic ornamentals, lawns, and ground cover. This may cause a change in the soil-water relationship with excessive runoff, topsoil erosion, fertilizer deposition, and the resulting negative water quality (Farrell 1986).

Tourism's impact on beach resources is due partly to the fixed nature of infrastructure and superstructure that must be developed to sustain the industry. Developments cannot adapt to environmental change, and beaches are dynamic resources. To preserve structures from natural beach erosion, seawalls, groynes, and other structures have been constructed, adding to the impacts on the beaches (May 1991).

Aesthetics

Tourism development can have a negative impact on visual quality. Large buildings that clash with the environment and differing architectural styles create unaesthetic views. This impact is especially noticeable in ribbon or sprawl developments along beaches or scenic byways, which are not only unattractive in themselves but block the view for others (Witt 1991).

Other Impacts

Other natural resource impacts may also occur as a result of tourism: noise from planes, cars, and tourists themselves (Edwards 1987; Karan and Mather 1985); damage to geological formations from trampling or rock climbing, collecting, and vandalism; fishing line and other tackle left by anglers (Edwards 1987); graffiti on natural features (Yong 1991); and other impacts.

Environmental Benefits of Tourism

Tourism also results in some positive influences on natural resources. Tourism has been the catalyst for preservation of natural areas. In numerous instances, parks that conserve natural resources have been extended protected status because the parks, as major attractions for tourists, create positive economic benefits (Farrell and Runyan 1991). Some reserves, especially in Third World countries, have been able to preserve wildlife that might otherwise have been destroyed (Olokesusi 1990). National Parks in numerous countries, including those in east Africa, were developed almost exclusively because they attract international tourists (Boo 1990). Some countries, such as Fiji, plan to establish protected areas for tourist to protect forest land from over-exploitation. Without an alternative with positive economic impacts, logging is unlikely to be curtailed (Weaver 1992).

Marine reserves have been established in over 100 countries as impacts on marine resources have increased due to tourism and other uses. Many of these areas require an entrance fee or provide rental equipment, guide services, and other services resulting in economic benefits for residents, which has provided the motivation for preservation (Salm 1985).

Plants have also been preserved as a result of tourism. In British Columbia, Douglas-fir forests have been saved from clearcutting because conservation and tourism organizations have been able to demonstrate that the natural forests are more valuable for tourism than for logging (Farrell and Runyan 1991).

In contrast to wetland destruction, some wetlands have been preserved, along with their life forms, for tourism. Wetlands and estuaries attract many people interested in wildlife observation, nature study, and photography, especially birders. Perhaps the most well-known protected wetland area is Everglades National Park in Florida (Bacon 1987).

Tourism can encourage productive use of agriculturally marginal land, enabling protection for such areas. It can

also frequently result in improved management of natural areas (McNeely and Thorsell 1989).

Another environmental benefit of tourism is the educational value of nature-based tourism. Through increased exposure to the natural environment, the government and citizens of a country, as well as tourists, may come to a greater appreciation and understanding of the value of natural areas and support protection (Yong 1991).

Alternative Tourism

Recognition that tourism can negatively impact the natural resource base of a destination has resulted in the emerging idea of "alternative tourism." According to Butler (1990, p. 41):

Tourism is an industry, a form and agent of development and change. It has to be recognized as such. Controlled and managed properly it can be a non or low consumptive use of resources and can operate on a sustainable basis. However, if developed beyond the capacity of the environment, the resource base, and the local population to sustain it, it ceases to be a renewable resource industry.

Alternative tourism is essentially the antithesis of high-impact tourism. Alternative tourism ideally results in less severe impacts while still providing positive economic benefits (Butler 1990). Numerous types of tourism are considered alternative: scientific tourism, biotourism, academic tourism, farm and ranch tourism, nature or environmental tourism, village tourism, and special interest tourism. One new alternative tourism trend is ecotourism.

Ecotourism aims to protect the natural environment while still encouraging tourism activity and gaining economic advantage. Traditionally, tourism that is environmentally oriented has been called environmental or nature tourism, but ecotourism goes beyond the bounds of nature tourism and specifically focuses on environmental preservation (Farrell and Runyan 1991). Ecotourism is "an enlightening nature travel experience that contributes to conservation of the ecosystem, while respecting the integrity of the host community" (Wight 1993, p. 3). Several positive impacts previously discussed are examples of ecotourism.

Although alternative tourism may help reduce some of the negative environmental impacts associated with tourism, the potential for resource degradation still exists. "However environmentally sympathetic, every tourist can be damaging to the environment, and few forms of alternative tourism are really amenable to a no-change scenario over time" (Butler 1990, p. 44). In some areas alternative tourism may be a viable option to mass tourism. Another option, however, may be no development at all (Butler 1990).

Tourism destinations that maintain a quality physical environment will have advantages over areas with resource degradation. While tourism development requires environmental alterations, the goal is to avoid negative change (Farrell and Runyan 1991). Therefore, the dependence the tourism industry has on natural resources points to the necessity of environmentally responsible planning and development (Romeril 1989). Destinations need to develop appropriate conservation policies and strategies to effectively manage tourism. Tourism managers must consider the needs of an area and its residents and determine the

physical and social carrying capacities of a destination (Butler 1990).

Legislation and regulation can help control negative impacts. For example, it is possible to regulate development and mandate environmentally pleasing building design. Regulation can control pollution problems and cleanliness of public areas (Witt 1991). Laws could control certain types of tourist activities, such as over-collecting. In some cases, reserves or protected areas may reduce the negative resource impacts of tourism (Salm 1986).

It is unrealistic to believe that mass tourism can be replaced with low-impact tourism. The market for mass tourism and its economic benefits cannot be denied. Alternative tourism can be developed to meet the needs of certain groups of people, allowing them to experience the natural and cultural wealth of regions. It is also useful for modest economic development in rural areas, or in environmentally or socially fragile areas that cannot support major change (Butler 1990).

Tourism is often sought because, relative to other types of development, it is the least harmful to the environment. But another option might also be considered: no development at all. Preservation of the existing natural environment must always be considered a viable option (Romeril 1989).

Conclusions

Although recent research has considered many types of environmental impacts from tourism, there is much work yet to be done. Some specific research holes need to be filled. Almost all of the studies reviewed have been concerned with specific natural or seminatural sites. Little research exists on environmental impacts in urban areas, for example. Wildlife research has centered on "popular" species, such as large mammals, birds, and coral reef species, so our understanding of tourism's effects on wildlife is limited. Additionally, most research on environmental impacts has been negative with little discussion of the positive impacts that also exist.

A major problem in tourism and environment research has been the lack of experiments that take base-line measurements prior to development and then track environmental change over time. The majority of work has been reactionary and conducted after the damage has taken place, with no comparative data available to document the extent of change or damage. Most of the articles reviewed either discuss the environmental impacts of tourism in an area based on research done more than 10 years ago or provide a general description of the effects of tourism that are fairly apparent by observation, with no actual data collection. As a result, although we know tourism caused environmental problems, we are left with minimal knowledge regarding the extent and time-line of impact.

It is also not possible to estimate how much impact is directly tourism related, as opposed to natural change or impacts from factors other than tourism. Research that begins before development occurs, takes base-line measurements, and tracks environmental change over an extended period is critical to understanding tourism's impacts on the environment.

Environmental impact research in tourism is widely dispersed, appearing in many varied publications and cutting across many disciplines. It is also fragmented, with no apparent coherent, comparative, cumulative effort providing a foundation on which to build a conceptual framework for additional research. Most studies generally look at the variety of impacts evident at a particular site or those produced by one specific activity.

Cumulative environmental impact results in a range of impacts over a wide area. The issue has not been addressed in tourism environmental impact research, nor in environmental and social impact assessment in general (Beckwith 1993). The overall need is for a conceptual framework that takes a broad view of tourism's environmental impacts considering the entire range and intensity of impact on a regional basis. Such an approach would increase our ability to understand and predict impacts prior to occurrence, mitigate such impacts, and ensure a sustainable tourism industry.

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Rural Action Class Perceptions of Tourism and Its Potential for Economic Development: Case Studies from Four Rural Pennsylvania Counties

Steven W. Burr

Abstract—Rural residents' perceptions of tourism and its associated impacts are important in planning, development, marketing, and operation of existing and future tourism projects. This study examines rural action class members' perceptions of tourism as a tool for economic revitalization in Pennsylvania's rural counties, its present impact, and its potential for rural economic development. As leaders in their rural communities, these individuals can influence the perceptions of the general rural populace and may have vested interests that affect their personal perceptions of tourism. Planners and developers involved in rural economic development and tourism should consider the implications of these findings.

Interest in the tourism industry is substantial and growing because of the industry's great economic base for many states and their communities. In Pennsylvania, for example, tourism is the second largest industry in terms of consumer spending, jobs generated, and income created (The Center for Rural Pennsylvania 1993). Whether the tourism industry prospers or declines is of great concern to states and communities (Economic Research Associates 1989; Federal Task Force on Rural Tourism 1989; Long 1991). This concern is especially strong in rural communities that continue to lag behind urban areas in terms of higher education and health care (LeDuc 1991), employment rates, job growth, median family income, equality of housing (Flora and Christenson 1991), and many other public services (Willits and others 1982).

Tourism development is presently touted as a viable economic development strategy to diversify a rural community's economic base, contributing to economic stability (Hunt 1992; LeDuc 1991; Long and Nuckolls 1992). This strategy can help rural communities address the problems (Brown 1992; Stokowski 1992). Tourism as a development industry can create recreational uses for the natural and created amenity resources of a rural community and can convert these resources into income-producing assets (Siehl 1990;

Willits 1992). Visitors from outside the immediate community, county, or state can bring money into rural areas through tourism-related spending. Tourism is a source of jobs, income, and tax revenues. It can employ both managers and unskilled, entry-level workers, provide opportunities for small business development, and support a variety of service-related businesses. Income is redistributed, often from affluent urban and suburban residents to service providers in rural communities. Tourism is generally perceived as being a "clean" industry with few serious environmental impacts, especially when compared to the resource extractive industries on which rural communities have been traditionally and often solely dependent (Grambling and Freudenburg 1990; Marchak 1990; McCool 1992; Robinson 1984; Weeks 1990).

When a community refurbishes to attract tourists and focuses visitors' attention on the unique features of local heritage, architecture, and scenery, local residents may experience a new sense of community pride (Willits 1992). Rural tourism development can play an important part in the process of community development. Ideally, rural tourism development involves community action. Support and involvement by the community are important components for sustainable rural tourism development, and these local actions and interactions help ensure the protection and preservation of environmental and community amenities that are the foundation of tourism (McCool 1987). From an interactional perspective, local action in tourism development offers key opportunities for developing contacts within the community, leading to relationships among community members and allowing for the natural emergence of other community networks (Burr and Walsh 1994; Wilkinson 1992).

Many benefits for rural communities and areas result from tourism development. Tourism can help stabilize, diversify, and improve the local economies of struggling rural communities, can help improve the quality of life in rural societies, and can contribute to the overall process of community development. Because of these potential benefits, using tourism as part of an economic development strategy for rural communities may make a lot of sense from the planner's and developer's points of view. However, consideration of resident perceptions of tourism and its potential for economic development is just as important. Sustainable tourism development contains within it a strong commitment of participation by local people and their government, to leadership on their part, and to be guided by their wishes (Cronin 1990).

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Over the past 20 years, research has increasingly focused on the impacts of tourism on "host" communities. Some early studies focused on the economic aspects of tourism (Pizam 1978). This approach is still ongoing, especially with regard to rural tourism. As a rural economic development strategy, tourism is widely perceived as a potentially basic industry that brings outside dollars to local communities and provides local employment opportunities, tax revenues, and economic diversity (Perdue and others 1990).

More recent research centers on the social effects of tourism because how residents perceive the planning, development, marketing, and operation of tourism programs is important (Ap 1992). Concerns about the impacts of tourism development on the rural quality of life and on the environment have created a significant demand for comprehensive planning, including assessments of local resident support for tourism development (Perdue and others 1990). Findings from research suggest that there is little difference in perceived tourism impacts by sociodemographic characteristics, that perceived impacts of tourism decrease as the distance between the individual's home and the tourism core of the community increases, and that the overall favorability of tourism impact perceptions increases with the individual's economic dependency on tourism (Milman and Pizam 1988; Murphy 1983; Perdue and others 1990; Pizam 1978). Resident support for tourism development often emerges when local economic conditions deteriorate (Perdue and others 1991).

Although our knowledge of resident perceptions of tourism and its potential for economic development is increasing, it is still limited, especially concerning the rural action class. Rural community leaders influence the planning, development, and implementation of local policies, initiatives, and projects in public and private agencies, services, small businesses, and tourism. Communities are not composed of homogeneous groups but consist of various interest groups each with its own priorities, methods, and power base (Murphy 1978, 1983; Sewell 1971). Many rural action class members have vested interests that may temper their personal perceptions of tourism. Leaders in the business sector, representing commercial interests in both the tourism and nontourism industries, are interested in economic growth and opportunity. Leaders in administration, local political leaders, and professional groups within local administrations lead and respond to public opinion, set policy, and guide policy decisions.

Rural action class leaders are most likely not a representative sample of rural America. Because of their importance and power, their perceptions will have an influence on tourism and tourism-related development in their rural area and can also affect the perceptions of the general rural populace. These rural action class leaders may attempt to affect the general perceptions of all rural residents to meet not only the greater needs and interests of the community, but their own as well.

This study examines rural action class perceptions of (1) the extent to which tourism has played a role in the economic revitalization of Pennsylvania's rural counties, (2) the impact tourism has had on rural residents, communities, and the environment, and (3) the potential of tourism for rural economic development in the future.

Methodology and Research Design

Four Pennsylvania counties, each having over 50 percent of their 1990 population residing in rural municipalities and, therefore, defined as rural according to the U.S. Census Bureau, were selected from different geographic regions of the state for in-depth case studies of tourism's role as an economic development tool. Although geographic distribution across the state was an important factor in the selection of the counties, other variables were also important. These included some variation among the four counties in total land area, population, population density, population change, percent of the population considered to be rural, age composition of residents, per capita and median income, education, and current unemployment rate. Descriptive data for the four case study counties are displayed in table 1.

Also of interest were county variations of past and present dependence on tourism, current levels of tourism development efforts, different types of tourism present (natural resource, outdoor recreation, historical heritage, cultural heritage, and special event), and both tourism-related and nontourism-related economic development activity.

Within each county, key informant interviews were conducted with a wide variety of individuals characterized as members of the rural action class. These individuals represented county, city, borough, township government, governmental agencies, and other public and private agencies and organizations. Other key informants represented media such as newspapers and radio stations. Although some of these individuals were professionally associated with tourism-related efforts and initiatives, such as an executive director of a tourism promotion agency, most were not. A modified "snowball" technique was employed through these key informant interviews to identify other individuals for further contact. This technique was especially useful in locating individuals involved in a tourism-related business or voluntarily involved in a special initiative or project related in some way to tourism development. Because these individuals were involved with a specific tourism action, they were distinguished as action informants.

An interview instrument included openended questions related to topics of interest. This was pilot-tested in one rural county, and after some minor modification was subsequently used in the three other counties. Overall, 53 key informant interviews and 23 action informant interviews were conducted in the four counties over a sampling time-frame of approximately 5 months during the first half of 1993. Table 2 outlines the different types of key and action informants interviewed for this study.

Secondary and supporting data were also gathered to further document the role of tourism in the selected counties. These data included information acquired in the form of county, city, town, and borough informational and tourism promotional pieces and informative newspaper articles.

The raw data for this study are field notes and tape records compiled from the key and action informant interviews conducted in the four rural counties. All field notes and tape records were transcribed into a standardized format to facilitate data analysis. The content of these transcribed interviews was then qualitatively analyzed by noting certain recurring themes, similarities, and differences.

Table 1—Descriptive data for the four case study counties in Pennsylvania.

Description	County ¹				Total
	Bedford	Greene	Cameron	Schuylkill	
Population	47,919	39,550	5,913	152,585	11,881,643
County seat	Bedford	Waynesburg	Emporium	Pottsville	
population	3,137	4,270	2,513	16,603	
Area (square miles)	1,017	577	398	782	45,888
Population per square mile	46.0	70.2	16.8	205.5	264.3
Population change (%) 1980-1990	2.4	-2.3	-11.4	-5.2	0.15
Population rural (%)	91.3	89.2	57.5	58.3	31.0
Age composition (%)					
0-17 years	25.1	25.6	25.6	22.1	23.5
18-64 years	59.6	57.9	55.9	57.9	61.1
65+ years	15.3	16.5	18.5	20.0	15.4
Per capita income (\$)	9,954	10,005	10,190	11,193	14,068
Median income (\$)	25,335	25,284	24,006	29,041	34,856
High school degree (%)	68.5	68.0	73.1	68.4	74.7
College degree (%)	7.8	11.3	9.8	8.1	17.9
Unemployment (%) as of 4/93	13.2	14.5	10.1	11.3	8.6

¹All data except the unemployment figures are from the 1990 United States Census. Unemployment figures are from the Pennsylvania Bureau of Labor Statistics.

Table 2—Examples of types of key and action informants interviewed in the four case study counties.¹

BEDFORD COUNTY KEY INFORMANTS (N = 14)	GREENE COUNTY KEY INFORMANTS (N = 15)
Executive Director, Office of Economic Development	Director, Industrial Development, Inc
Senior Planner, Office of Economic Development	Director, County United Way
Medical Professional and Community Activist	Administrator, County Historical Society
Borough Manager	Director, Health and Human Services
Editor, Community Newspaper	Director, County Parks and Recreation
Director of Planning, Office of Economic Development	Director, County Planning Commission
President, County Historical Society	Editor and Publisher, County Newspaper
Director, Chamber of Commerce	County Commissioner
County Commissioner	Supervisor, Area Agency on Aging
Director of Tourism Promotion Agency	State Park Manager
Mayor, Small Town in County	Executive Secretary, Chamber of Commerce
Past President, Federal Retired Employees Association	President, Area Tourism Promotion Agency
Director, Retired Senior Volunteer Program	Borough Council Member
BEDFORD COUNTY ACTION INFORMANTS (N = 6)	GREENE COUNTY ACTION INFORMANTS (N = 5)
Organizer, Special Tourism Event	Owner, Local Bed and Breakfast
Owner, Local Tourist Attraction	Owner, Local Tourist Attraction
Organizer, Tourism Development Effort	Manager, Local Tourist Attraction
CAMERON COUNTY KEY INFORMANTS (N = 13)	SCHUYLKILL COUNTY KEY INFORMANTS (N = 11)
Executive Director, County Economic Development Office	Executive Director, County Visitors Bureau
Executive Director, County Chamber of Commerce	Executive Director, Chamber of Commerce
County Commissioner	County Commissioner
Director, Office of Human Services	Director, Economic Opportunity Cabinet
Executive Director, County Tourism Promotion Agency	President, Economic Development Corporation
Marketing Director, Tourism Promotion Agency	President, County Historical Society
Executive Director, Community Action Corporation	Member, Community Betterment Association
Owner, Local Radio Station	State Park Supervisor
Publisher and Editor, County Newspaper	City Administrator
CAMERON COUNTY ACTION INFORMANTS (N = 4)	SCHUYLKILL COUNTY ACTION INFORMANTS (N = 8)
Owner, Campground and Motel	Manager, Local Tourist Attraction
Organizer, Special Tourism Event	Organizer, Tourism Development Effort
Owner, Local Tourist Attraction	Manager, Local Tourist Resort

¹N = 53 for all key informants; N = 23 for all action informants.

Table 3—Key informant responses to the question: What are the major elements in this county's economic base?

	Frequency of response	
		Percent
Tourism not mentioned as major element	38	72
Tourism mentioned as being major element	15	28
Total	53	100

Findings

The study found rural action class members' perceptions of tourism and its potential for economic development to be extremely varied, although some common themes emerged. First, tourism was not recognized as a major element in each county's economic base. When asked about the major elements and employers in the county's economy, almost three-quarters of the 53 key informants did not identify tourism or tourism-related businesses as major players (table 3). Key informants who mentioned tourism as a major element were, for the most part, professionally or voluntarily associated with tourism-related development and promotion. When specifically asked about the role of tourism in their county's economy, almost nine out of 10 key informants felt that it did play a role, although perceptions about its economic importance ranged from tourism playing some role and being a viable force (45 percent) to tourism playing an extremely significant and increasingly important role (42 percent) (table 4). Only seven of the 53 key informants felt that tourism played an unimportant or insignificant role.

Additionally, tourism was often mentioned as the basis for some local economic development and impact (see lower portion of table 4). Some perceived it as having a raised

profile in terms of its actual economic impact. As one informant stated, "We know it's here; we just don't know what the real impact is for our local economy." This appeared to be a recurring theme. Although some informants were vague about tourism, generally they perceived its significance for future economic impact if certain resource and development constraints could be overcome. Some informants felt that rural residents were becoming increasingly aware of the benefits of tourism and, consequently, were much more supportive of tourism-related development. Other informants noted that it was difficult to make residents aware of potential benefits.

Key informant perceptions of tourism impacts on the county's residents, communities, and environment were again varied and mixed. Although more informants perceived tourism as making an important impact with positive economic benefits (24 responses), quite a few informants perceived tourism as having minimal or no impact (18 responses) (table 5). Mentioned were the opinions that tourism was not large scale, that the numbers of tourists were insignificant, and that there was no tourism in the county. Mentioned more frequently were feelings that people wanted tourism for economic development, that tourism brought new businesses to the area, that tourism increased the number of jobs and provided entry-level jobs for the unemployed and underemployed, and that construction of vacation homes provided employment for local workers.

Of further interest were perceptions associated with tourism's contribution to the quality of life for rural residents. Because tourists are interested in visiting the resource amenities of these rural counties, local residents have become more aware of what they have and who they are. Tourism is perceived as contributing to a positive self-awareness and self-image and has helped to develop local enthusiasm and pride. Many rural people who want to keep their history and way of life going see the potential for tourism to achieve this and, consequently, are willing

Table 4—Key informant responses to the question: What is the role of tourism in this county's economic base? (N = 53).

Summary themes	Total responses	
		Percent
Plays some role; is a viable force	24	45
Plays an extremely significant and increasingly important role	22	42
Plays an unimportant or insignificant role	7	13
	N = 53	100
Basis for some economic development and impact	18	
Raised profile in terms of economic impact	8	
Will generate future economic development	6	
Difficult to measure/quantify economic impact	6	
Potentially significant, but presently limited by resources	13	
Don't see it as a future growth industry	3	
Could play a big role, but unsure about growth	2	
Not steady; need to develop it so it's steady year-round	2	
Need more development, but in moderation, small-scale	2	
Nice "back-up" industry	1	
Residents becoming aware of benefits and are supportive	5	
Difficult to make residents aware of potential benefits	3	

Table 5—Key informant responses to the question: What have been the results or impacts of tourism in this county? (N = 53).

Summary themes	Total responses
Makes an important impact with positive benefits	14
Positive economic impact; stimulates the economy	10
Not a great impact; minimal	11
No real results or impacts	7
Should and could play a major role	5
Hard to measure, but know there is an impact	4
Some impact, but not high profile, not concentrated	2
Perception that there is no tourism here	2
Not large scale; numbers of tourists insignificant	1
People want it for economic development	5
Provides entry level jobs for unemployed/underemployed	5
Increase in jobs due to visitor expenditures	4
Has brought some new businesses here	3
Vacation home construction provides work for tradesmen	1
Contributes to quality of life for residents	8
Some visitors come and stay; more retirees moving here	6
More environmental awareness; environment is the product	5
People want to keep history, way of life, and share these	4
Contributes to positive self-awareness and self-image	3
Has helped to develop local enthusiasm and pride	3
Better sites, attractions, and products	3
Positive impact for residents	3
Stimulates thought processes due to contact with visitors	1
Much to offer, but need cooperation and common goals	4
Need more development and promotion	2
Most residents don't see the value and benefits of tourism	2
Starting to realize the value, but don't know how to develop	1
Many groups working on tourism because economy is bad	1
All positive results or impacts	34
Some negatives (all minor because of small scale)	
Increased litter	7
Increased traffic; parking problems	6
Demands on infrastructure	3
Demands for services	3
Hard feelings between locals and visitors	1
Have to wait longer in lines	1
Changed nature of downtown businesses; too tourist oriented	1

to share with visitors. One informant even mentioned that contact with outside visitors had stimulated thought in the local residents. Additionally, tourism has resulted in more environmental awareness among rural residents because a quality environment is the product of rural tourism. This has also resulted in better sites, attractions, and tourism-related products.

While 34 informants responded that the results or impacts of tourism in their county had been all positive, other informants identified some negative impacts (table 5), including increased litter and traffic, increased demands on the infrastructure and demands for services, and some hard feelings between locals and visitors. One informant had to wait longer in lines, while another felt that tourism had made downtown businesses too tourist oriented. However, the informants considered these as relatively minor inconveniences or ones occurring only at peak times of tourist visitation. There was some concern that these impacts

could become more problematic for residents with future tourism development and the presence of increased numbers of tourists.

When asked what the future of tourism is in the county's economy, optimism among key and action informant responses ranged from optimistic but dependent upon certain conditions being realized, to pessimistic/negative, to not knowing or being unsure (table 6). Over three-quarters of informant responses were optimistic. Strong proponents perceived tourism as playing an important key role in the future and as being perhaps the biggest contributor to the county's economy. Two informants in Cameron County were strong in their opinion that tourism is the future of the county. Tourism was perceived as a strong growth industry that would provide good opportunities for businesses and help diversify the county's economic base. Less than one-quarter of informant responses were pessimistic, and these reflected the perception that there were few or no major

tourist attractions in the county and that local residents were apathetic, lacked enthusiasm, and resisted change. Pessimists preferred higher paying jobs in manufacturing rather than low-pay tourism jobs. Two informants, one in Cameron County and one in Schuylkill County, did not know or were unsure about the future role of tourism.

Of the informants who were optimistic or hopeful about the future of tourism in the county's economy, many opinions were dependent upon certain conditions being realized or certain barriers or constraints being overcome. Several evident themes are displayed in the lower portion of table 6:

1. Increased efforts must be directed toward developing a broad and diverse mixture of attractions and activities for tourists, along with the necessary infrastructure and services to support increased numbers of tourists.

2. Efforts must continually be made to increase both resident and government awareness, interest, support, and involvement in tourism development.

3. A need exists for better organization, leadership, and cooperation among interested and active parties.

4. Residents need to decide if tourism development can be realized, and if the rural county and its residents can capitalize on tourism based on the available amenities that might be attractive to tourists.

5. It is important that tourism produces jobs and income for local people, but tourism development should be balanced, not over-commercialized, and should not negatively affect the quality of life for rural residents.

6. There is need for effective planning for tourism and associated development, but this should not be imposed from the "outside." Local control must be maintained.

Discussion and Implications

The findings from this study have some implications not only for professional planners and developers involved in economic development and rural tourism, but for rural community leaders interested in developmental strategies that will help stabilize, diversify, and improve local economies, and also improve the quality of life and contribute to community development.

First, if the perceptions of this sample of the rural action class are any indication, rural tourism and tourism-related development have positive potential. A large majority of these rural influentials are generally optimistic about the future of tourism in their county's economy. However, these perceptions may hold true for any sector of development that has the perceived potential for positive local economic impact.

Second, unlike some other studies that have reported many perceived negative impacts, the results or impacts of tourism and tourism-related development are generally perceived positively by these members of the rural action class. Although some impacts are perceived negatively, such as littering and increased traffic, they are thought of as minor inconveniences or as occurring only at peak times of tourist visitation. Many of these rural influentials are astute in recognizing that such impacts could become problematic in the future with an increase in the scale of tourism visitation, and there is an awareness that planning for development and local control are critically important.

Table 6—Key and action informant responses to the question: In your opinion, what is the future role of tourism in this county's economy? (N = 76)

Characterization of responses Summary themes	Total responses
Strongly Optimistic	16 Total
Will play a very big, very important role in the future	8
It is the future; has got to play an important role	3
Could be the biggest contributor to the economy	5
Optimistic	25 Total
Good opportunities for businesses to grow and develop	7
Will continue to play an important/key role; good future	6
Will continue to grow stronger in the future	5
In a good position, location, and have good resources	7
Somewhat Optimistic/Hopeful	17 Total
Hope it gets better in the future; need tourism for economy	3
Not as important as it should be; hope it gets better	4
Will play some role; works as one strategy; complementary	4
Tourism can be a growth industry	3
There might be more of a role for tourism in the future	3
Pessimistic/Negative	16 Total
Little or no future potential; few or no major attractions	6
Resident apathy, lack of enthusiasm, resistance to change	6
Tourism jobs are not the way to go; prefer manufacturing	4
Will never be large scale, so won't be a great influence	3
If there is any growth, it will be gradual and not a big deal	1
May add some jobs, but won't increase incomes; low pay	2
Minimal role; low priority when compared to better jobs	2
Really nothing here to promote	1
May be potential, but it will never be realized	1
Don't see much growth happening now or in future	1
Don't have capital for development	2
Don't Know/Unsure of the Future	2 Total
Optimistic/Hopeful, but Dependent Upon	55 Total
Development of major attraction(s); things for visitors to do	6
Development of necessary infrastructure	6
County and local government interest and support	6
Whether tourism development can be realized	5
Resident support and effort directed toward development	4
Whether tourism produces jobs for people	4
Development of broad/diverse mix of attractions	4
Available knowledge and expertise to develop tourism	3
Better organization and cooperation	3
Available funding; dependent on outside funds	3
Whether local residents can be educated about importance	3
Planning and development not imposed from outside	3
Balanced development, not over commercialization	2
Capitalizing on tourism and what we have to offer	1
Planning for associated development that will come	1
Better definition of tourism and real and potential benefits	1

Third, although a large majority of these key and action informants perceived the future of tourism with optimism and believed that there is a great to good potential for future tourism development, there were mixed perceptions about whether the potential could be realized or if tourism could be a major growth industry. It is obvious that increased efforts must be directed toward identifying and developing a broad and diverse mixture or "cluster" of attractions and activities for tourists. This mixture must then be effectively packaged and marketed to the tourists. Increased visitation

will require the development and maintenance of the necessary infrastructure and services to support increased numbers of tourists. In addition to the need for more funding to support tourism development, one perceived problem seemed to be that even though some interest groups were active in certain tourism-related efforts, overall coordination and cooperation were lacking. Volunteers were perceived to be the main participants in such efforts, and a lack of professionalism, limited progress, and difficulty in county-wide promotional efforts were all identified by informants as constraints. Also recognized were the need for professional knowledge and expertise in tourism development and the need to include tourism as a component in any county-wide planning.

Fourth, if tourism development is a viable economic development strategy helpful in diversifying a community's economic base and contributing to economic stability, it must be more readily recognized by rural action class members and other rural residents as being important and present. This requires more readily available supportive data about tourism's impact and real benefits at the local level and the development and implementation of strategies to diffuse such information throughout the rural populace in order to gain local support. Key informants who were the strong proponents of tourism perceived a great need to "educate" workers in the service industry about the importance of tourism, and to educate all rural residents about the realized and potential benefits of tourism. Many informants felt that increased resident awareness would generate greater support for tourism and would be manifested by greater hospitality extended to visitors and a willingness to absorb certain tourism-related costs or inconveniences.

Fifth, with the potential for increased tourism, there is concern that there will be too much uncontrolled growth, too much overcommercialization, loss of local control over development, and the degradation of valuable resources. The definite concern here is one of maintaining balance in development and of making development sustainable in the long term.

Sixth, one of the assumptions of this study was that members of the rural action class are influential with the general rural populace because of their positions of importance and power. This study demonstrated that these individuals are sophisticated, perceptive, astute, and have strongly held optimistic opinions about tourism. It would be interesting to examine more closely the extent of their influence with the general rural populace. In order for tourism development initiatives and efforts to be successful, it is important to seek out and actively involve supportive members of the rural action class who are proponents and promoters of such development at the local level.

Finally, if Federal, state, and local governments are concerned about improving and sustaining rural economies, improving the quality of life for rural residents, and making a viable contribution to the process of rural community development, resources should and could be allocated for rural tourism development where reasonable (perhaps as one component of a larger developmental strategy) and could be directed to address the perceived constraints identified by these rural action class members. Their support and involvement are vital components of rural tourism development, and their perceptions and efforts affect

the general perceptions and efforts of all rural residents. A greater recognition and understanding of these perceptions can help tourism-related planning and development initiatives to be more effective in attaining set goals and, in the process, benefit rural communities and their residents.

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Impacts of Tourism Development in the Penghu National Scenic Area, Republic of China

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Abstract—The social mobilization theory was used as the basis for understanding attitudes toward tourism development. Planners and decisionmakers should encourage community involvement and provide an opportunity for residents to be heard and to influence policy. A multiple regression model suggests that the majority of variance in attitude is attributable to the rate of community growth, to impacts on recreation opportunities, to residents' ability to influence tourism development, and to whether decisionmakers listen to residents' concerns. These findings support the social mobilization theory as a possible model for tourism planning and are consistent with other tourism impact research. Extensive efforts should be made to identify ways to involve local residents in tourism planning and design efforts.

We explored the theory of using social mobilization (Friedman 1987) as a basis for understanding attitudes toward tourism development. The social mobilization theory suggests that planners and decisionmakers should use community involvement to help develop solutions for tourism problems. Embracing social mobilization suggests that tourism planners should strive to understand community values, concerns, and issues, and should provide opportunity for residents to be heard by decisionmakers and to influence policy.

The social mobilization theory is grounded in what Friedman (1987, 1993) calls social learning. The social learning model of planning argues for an open process with critical feedback. Openness in meetings, media access, and evaluative research play important roles. The challenge is for the planner to assist the community to be effective in the economic development approach taken, to think about why the approach is important, and to consider the alternatives and consequences of the approach (Boothroyd and Davis 1993). A variety of mechanisms and techniques designed to solicit information and public recommendations on local development options are required.

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Planners suggest that the adoption of a local economic development policy (that includes tourism development) is expected to be consensus oriented. Yet some tourism planners maintain that controversies over policy may constrain economic development. In fact, Donovan (1993) found that in cities where controversy over economic development options were high, the city did less to promote economic development. In fact, communities with policymakers who did not feel constrained by controversial issues did more to promote economic development.

It seems prudent to identify the issues that concern the public, and then to use an approach that may mitigate some of the perceived impacts. Resident views of the tourism planning and development process should be taken into account to ensure developments will be successful. Recently, concern has moved from a narrow focus on physical or promotional tourism planning to a broader, more balanced approach that recognizes the needs and views of both the developers and the community (Inskeep 1991).

There are many views of tourism development. Some people believe that tourism promotion and the development potential for tourism should be of primary governmental concern, while others (Choy 1991) argue that tourism has considerable negative impact and government should be primarily concerned with controlling the impacts of tourism. Specifically, Jafari and Ritchie (1991) noted that community demands will require governments to be responsive to resident issues and concerns in the future. Specifically, government involvement in the identification and definition of variables that influence resident attitudes is crucial to understanding the dynamics of tourism development at local and regional scales.

Recently, public participation has been identified as a goal of sustainable development. A study of planners and landscape architects in northern California, Oregon, and Washington revealed that public participation methods and programs are extremely important to the success of their current practice (Knowles-Lankford 1992; Knowles-Lankford and Lankford 1994). The respondents indicated that public participation programs need to be expanded to include a diverse group of actors in the planning and development process. Additionally, Brindley (1991) identified several goals of sustainable development, including the need to consult with the public, to plan small-scale projects, to let the people benefiting from the project make the decisions, and to provide education and training to the public and to employees.

In fact, a goal of sustainable tourism has been partly the creation of partnerships with local values and norms. Draper and Kariel (1990) related sustainable tourism to

public participation as decisionmaking processes that are locally determined and cooperatively implemented, planning and management that nurtures local cultures, and promotion and marketing activities that are conducted with contributions from local people. Therefore, social mobilization theory may provide a means for communities to involve residents while moving toward a goal of local sustainable tourism.

Study Area

Penghu (sometimes referred to as The Pescadores of the West) is situated along the Strait of Taiwan and consists of 64 islands of which 20 are inhabited. The current population of the islands is nearly 100,000. In 1985, there were 141,540 visitors to Penghu; and in 1990, there were 446,207 visitors (an increase of 315 percent). The Tourism Bureau estimated 933,000 visitors arrived in Penghu during 1992. Tourist visits are seasonal because of the winter monsoon season during the fall and winter months. April begins the tourist season, but the majority of tourists visit during August, the final month of the season.

Fishing and agriculture are the primary sources of income for the islanders. The Taiwan Tourism Bureau has determined that Penghu's unique tourism resources can be developed to diversify and encourage local economic growth. The government hopes tourism development in Penghu will alleviate the overcrowded conditions of tourist destinations on the Island of Taiwan. It is expected that Penghu will draw a significant number of visitors away from other Asian destinations. Consequently, the Penghu National Scenic Area was established in 1991 as part of the Six-Year National Development Plan. The plan includes planning and research to manage and develop local recreation and tourism resources. The Penghu National Scenic Area includes all 64 islands within the chain.

Methods

Our primary objective was to identify the extent that residents of the Penghu National Scenic Area support recreation and tourism development. We hope these findings will offer insight into future recreation and tourism planning and development in the Penghu National Scenic Area. The study addressed six research questions:

1. To what extent is a standardized multiple-item scale (tourism impact attitude scale translated into Chinese) for measuring resident attitudes toward tourism internally consistent (Lankford 1991; Lankford and Howard 1994)?
2. What is the level of public support for recreation and tourism development?
3. What differences in attitude exist between residents of Makung (most populated) and the Northern and Southern Islets (least populated)?
4. What differences in attitude occur due to seasonality of tourism?
5. What independent variables identified in previous research studies, using the tourism impact attitude scale, contribute to predicting attitudes toward tourism and recreation development in Penghu?

6. What variables suggest that social mobilization may be a model for the development of tourism at the community and regional level?

Social mobilization was operationalized as "ability to influence tourism development" and "decisionmakers listen to residents' concerns." We treated social mobilization as an independent variable. A number of additional independent variables have been identified from previous studies for use in this study. The following independent variables were tested in the United States (Lankford and Howard 1994), using the English version of the tourism impact attitude scale, and tested for contributions to prediction in this study:

1. Economic dependency on tourism has been shown to promote favorable attitudes toward tourism (Lankford 1991; Lankford and Howard 1994; Milman and Pizam 1988; Thomason and others 1979).
2. Resident involvement with local tourism development decisionmaking appears to influence the level of support and attitude toward tourism and tourists (Cooke 1982; Lankford 1991; Lankford and Howard 1994).
3. When residents are involved with various community activities or organizations (self-assessed community involvement), they appear to be more favorable toward community change and development (Allen and Gibson 1987; Ayers and Potter 1989).
4. Length of residence and birthplace also influence attitudes toward tourism (Um and Crompton 1987).
5. The level of contact with tourists influences residents' attitudes toward tourism and tourists (Brougham and Butler 1981).
6. If residents felt that tourism was having an increasingly negative impact upon their own outdoor recreation opportunities, the desire for further tourism development decreased (Lankford 1991; Lankford and Howard 1994; Perdue and others 1987).

Data Collection

Households were randomly selected for participation in the study. One household from every third dwelling unit was chosen for the interview. Subjects were asked to fill out the brief tourism impact attitude scale and return it to the interviewer. Interviewers were employees of the National Scenic Area Administration, located in Makung, Penghu National Scenic Area, Republic of China. We collected 971 surveys (proportioned according to population of the three major islands) during April and August 1993. We collected 497 surveys during April, the beginning of tourist season. During August, both the final month of the tourism season and the month with the heaviest tourist visitations, 474 surveys were collected in the same communities. As a result of the sampling process, some of the households were the same units surveyed during April.

Attitude Scale and Translation

The tourism impact attitude scale used in this research included 27 Likert-scaled items and a number of sociodemographic questions. The scaling of items: 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly

Table 1—Factor pattern coefficients for study sample, n = 971.

Factor items	F1	F2	F3	F4	F5	Communality
Actively encourage tourism in my community	0.82	0.32	0.01	0.12	0.42	0.69
Tourism vital for community	.79	.27	-.05	.21	.39	.63
Should encourage tourism in Penghu	.77	.30	.03	.27	.44	.62
Community should become more of a tourist destination	.73	.25	.06	.21	.39	.56
Support tourism as main industry	.72	.22	-.06	.06	.56	.60
Government is right in promoting tourism facilities	.70	.29	-.10	.27	.34	.52
Tourists are valuable	.68	.25	.01	.35	.44	.52
Community should encourage more intensive development	.67	.16	-.12	.21	.40	.43
Benefits outweigh negative consequences	.56	.22	.03	.12	.33	.33
Planning can control negative impacts	.38	-.03	-.24	.32	.17	.27
Against new facilities that will attract more tourists	.41	.74	.01	.05	.23	.60
Limit outdoor recreation development	.25	.69	-.16	-.08	.08	.57
Should not try to attract more tourists	.47	.68	.14	.05	.22	.55
Noise level is inappropriate	.19	.62	.27	.17	.17	.44
Has negatively impacted environment	.04	.56	.38	.19	.15	.45
There is more litter due to tourism	.14	-.00	-.82	-.01	-.05	.71
Tourism has increased crime	.17	.33	.68	-.05	.09	.56
Town has better roads due to tourism	.30	.08	.09	.75	.38	.60
Public services have improved	.34	.12	.18	.69	.46	.59
Support tax levies for tourism	.20	.07	-.16	.64	.13	.45
More money to spend from tourism	.36	.10	.08	.23	.79	.63
Tourism jobs are desirable	.44	.16	.00	.14	.88	.63
Tourism increased standard of living	.31	.17	.08	.32	.77	.63
Tourism will provide more jobs	.51	.15	.00	.15	.76	.62
More recreational opportunities	.40	.17	.15	.35	.65	.47
Tourism plays major economic role	.38	-.03	.05	-.06	.64	.60
Shopping opportunities are better	.12	-.01	-.10	.19	.49	.44

disagree. The alpha scale coefficient of the original English version of the instrument was 0.9643 for the 27-item attitude scale. The scale was initially translated into Chinese and then sent to another Chinese translator who reviewed the items and compared them to the English version. Corrections were made after consultation with the first author of this paper. Finally, the instrument was reviewed by bilingual (Chinese and English) staff of the Penghu National Scenic Area, resulting in some minor final adjustments to the wording of questions.

Results and Discussion

Tables 1 and 2 present the results of an analysis of the properties of the scale. The alpha scale coefficient for the 27 items in Chinese was 0.9027, and compares favorably to the English version of the scale (0.9643). A five-factor solution accounted for 54.6 percent of the total variation in the data. Kaiser's overall measure of sampling adequacy was 0.93, indicating the data are appropriate for the principal

Table 2—Factor alphas and explained variance, n = 971.

Factor interpretation	Factor statistics				
	F1 Promote/ positive	F2 Anti- promotion	F3 Impacts	F4 Public services	F5 Benefits of tourism
Eigen value	8.43	2.09	1.83	1.26	1.09
Percent variance	31.20	7.80	6.80	4.70	4.00
Cumulative percent		39.00	45.80	50.50	54.50
Alpha	.89	.72	.53	.61	.83

components model. Oblique rotation was used because of the likelihood of the items being correlated with one another (Harmon 1976; Kass and Tinsley 1979). The inter-factor correlations ranged from 0.01 to 0.5. Factor 1 was labeled promotion and positive aspects of tourism (10 items, $\alpha = 0.89$); factor 2 was viewed as an antipromotion factor (5 items, $\alpha = 0.72$); factor 3 can be interpreted as an impact factor (2 items, $\alpha = 0.53$); factor 4 can be interpreted as a public service factor (3 items, $\alpha = 0.61$); and factor 5 represents the benefits of tourism (7 items, $\alpha = 0.83$).

Residents of Makung (the most populated isle) differ significantly ($p < 0.01$) from residents of the northern islets for the entire 27-item scale. It appears that Makung residents are more positive about promoting tourism (factor 1) and about the overall benefits of tourism (factor 2) than are residents of the northern and southern isles. To help explain the differences in group attitudes, various socio-demographic characteristics were analyzed. Appropriate significance tests were conducted on the characteristics of sex, employment in a tourism-related occupation, whether the respondent was born within the region, age, length of residence, and the number of civic organizations to which they belonged. No significant differences were evident among the groups (islands) relative to their sex or to the number of civic organizations to which they are affiliated. A significant difference ($F = 8.16$; $p < 0.001$) did exist in the age of respondents, with the Northern Isle respondents being younger than other groups. Additionally, a significant difference was found in the length of residency ($F = 13.98$; $p < 0.001$), with Northern Isle residents having the longest residency and the Southern Isle residents having the shortest residency. A significant association was also found in the place of birth of the respondents of the three subsamples studied ($X^2 = 8.04$; $p < 0.05$) and the occupational status of respondents ($X^2 = 6.59$; $p < 0.05$). It appears that fewer people work in the tourism industry in the southern islands, while the northern island respondents had the most (proportionately) residents employed in tourism.

Residents surveyed (from all three isle areas) during April were more positive toward tourism and recreation

than were respondents surveyed in August. With the exception of factor 3 (impacts), all comparisons differed significantly at the $p < 0.01$ level. It appears that seasonal variations in attitudes do exist within this sample (table 3). For the seasonality analysis, appropriate significance tests were also conducted on the characteristics of age, length of residency, number of community organization affiliations, sex, whether the respondent was born within the region, and employment in a tourism-related occupation. Only one significant association ($X^2 = 9.15$; $p < 0.01$) was found between the percent of males and females sampled. More females were sampled during August and more males were sampled during April.

Independent variables were initially tested to determine if multicollinearity existed. We found no high intercorrelations between the independent variables. To investigate the multivariate relationship between the independent and dependent variables (the five subscales), we conducted a canonical correlation analysis. The overall multivariate relationship was significant for the sets of variables (the five factor subscales and the independent variables), Wilk's $\lambda = 0.30$, $F = 11.20$, $p < 0.001$. The analysis revealed an overall significant multivariate relationship between the sets of variables, with factor 1 as the most significant contributor (canonical correlation = 0.74). Univariate F-tests revealed significance at the $p < 0.001$ level for each factor. A multiple regression was used as a followup to the canonical analysis for interpretation purposes.

Independent variables drawn from the study conducted in the United States (Lankford 1991; Lankford and Howard 1994) were analyzed to determine their unique contribution toward explaining the variance of the factors identified in the Chinese version of the scale. The multiple correlation coefficient (R) between the predictor variables and the criterion (attitude – subscales) is moderate to high for the total scale and for all the factors except factor 3 (impacts). The independent variables explain 57 percent of the variance in attitude for the total 27-item scale, 47 percent for factor 1, 44 percent for factor 2, only 0.08 percent for factor 3, 34 percent for factor 4, and 43 percent for factor 5. Each model is significant at the $p < 0.0001$ level. The prediction for

Table 3—Statistical comparison of mean scores of factors by season, $n = 971$.

Scale/factors	First of tourist season $n = 497$ mean (SD)	Last of tourist season $n = 474$ mean (SD)	t-value	df	Probability
27-item scale	97.75 (10.57)	94.14 (11.21)	4.88	863	0.001
F1 Promotion/positive	40.97 (5.96)	38.47 (6.53)	5.98	896	.001
F2 Antipromotion	12.82 (3.62)	13.95 (3.44)	4.88	926	.001
F3 Impacts	6.64 (1.69)	6.81 (1.81)	1.43	942	.152
F4 Public services	10.79 (2.49)	10.15 (2.35)	4.05	940	.001
F5 Benefits of tourism	26.59 (5.27)	24.80 (4.95)	5.34	930	.001

Note: The scale ranges from 5 = strongly agree to 1 = strongly disagree. Consequently, the higher the mean score, the more support there is for tourism or agreement with regard to the subscale.

factors 3 and 4 may be minimal because of the number of variables within each factor (2 and 3 items, respectively).

Beta coefficients from the regression model indicate that six variables have a significant influence on resident attitudes toward tourism for the 27-item scale (table 4): the perceived rate of growth of a respondent's community ($\beta = -0.37$); expansion of recreational programs ($\beta = 0.18$); residents' influence on future development ($\beta = 0.14$); age ($\beta = 0.11$); decisionmakers listening to concerns ($\beta = 0.07$); and how often a resident talks to tourists ($\beta = 0.06$). Table 4 indicates that the concern for the rate of community growth (bringing about change) is of great importance in predicting support for tourism. The direction of these beta weights suggests that if people perceive that their community is growing rapidly, that decisionmakers don't listen, that people cannot influence tourism development policies, and that they are losing recreation opportunities, their support for tourism diminishes.

The belief that recreation programs for residents have expanded because of tourism is positively correlated with the scale and subscales (factors), except for the antipromotion (F2) and impact (F3) subscales. The ability to influence the decisionmaking process is also positively correlated with attitudes, except for the antipromotion (F2) and impact (F3) subscales. Interestingly, those respondents who felt that tourism has negative impacts (factor 3) also indicated that decisionmakers do not listen to them regarding their concerns ($\beta = -0.10$, $p < 0.001$). The impacts of tourism on resident outdoor recreation opportunities are negatively correlated with factor 1 (promote/positive, $\beta = -0.12$, $p < 0.001$), factor 4 (tourism improves public services, $\beta = -0.08$, $p < 0.001$) and factor 5 (benefits of tourism, $\beta = -0.07$, $p < 0.001$). Perceptions of the impacts on outdoor recreation opportunities are positively correlated with factor 2 (don't promote tourism, $\beta = 0.43$, $p < 0.001$) and factor 3 (impacts of tourism, $\beta = 0.18$, $p < 0.001$). Finally, respondents were generally more supportive if they felt they could influence tourism development ($\beta = 0.14$, $p < 0.001$).

Conclusions

Our findings suggest that residents generally support tourism development in the Penghu National Scenic Area, but they have specific concerns. Respondents recognized the employment and economic benefits of developing the industry. However, residents were not as positive about tourism toward the final stages of the tourism season in August as they were in April. It appears that residents of the lightly populated areas are more concerned, and possibly frightened, by the potential changes that the National Scenic Area status will bring to their communities and to their rural way of life. Interestingly, these findings differ from Butler's (1980) suggestion that communities in the advanced stages of tourism development would exhibit more negative attitudes toward tourism. It seems that the findings are related more to whether people are rural or urban (Belisle and Hoy 1980). Additionally, it appears that the younger people are more concerned about the impacts of tourism (factor 3) and are more supportive of limiting tourism promotion (factor 2).

The finding that growth rates were a significant predictor of attitude or support for tourism has important growth management implications. Growth management merely suggests that residents can and should focus on the qualities of the community they would like to preserve and minimize impacts on those resources and amenities. As Gill and Williams (1994) noted, growth management, unlike the more restrictive notion of carrying capacity, offers an approach that allows communities to comprehensively plan and control their own futures. The respondents imply that they are concerned about growth and want to approach it in a systematic fashion.

This research confirms the validity and reliability of the tourism impact attitude scale. Due to the relatively high alpha coefficient of the scale, a short version should be explored to expedite the use of the scale in English-speaking regions.

Table 4—Multiple regression analysis: influence of independent variables on tourism impact attitudes for total attitude scale (27 items) and subscales.

Independent variables	Beta weights					
	F1	F2	F3	F4	F5	Total
Rate of growth of community	0.39*	-0.19*	-0.06	0.29*	0.41*	-0.37*
Recreation programs have expanded	.15*	-.04	-.02	.20*	.21*	.18*
I can influence future tourism development	.14*	-.04	-.08**	.03	.09*	.14*
Age	.10**	-.03	.04	.07	-.00	.11**
Decisionmakers listen to residents	-.01	-.05	-.10*	.19*	.04	.07*
How often talk with tourists ¹	.11*	.09*	.00	.00	.10*	.06**
Tourism has reduced outdoor recreation opportunities	-.12*	.43*	.18*	-.08*	-.07*	.02
Frequency of visiting tourist areas ¹	.09*	.06**	.03	.01	.03	.05
Sex ²	-.06**	-.05	.05	-.03	-.02	-.02
Tourism provides recreation facilities for local people	.05**	.02	.08**	-.00	-.02	.02
Formed friendships with tourists ¹	-.04	.01	.03	.09*	.02	.02
Knowledge of local economy	.05**	.01	.04	-.01	.03	.00

* $p > 0.001$

** $p < 0.05$

¹Coded: 3 = often, 2 = occasionally, 1 = never.

²Dummy-coded: 0 = male, 1 = female.

Our findings support social mobilization as a possible model for tourism planning. Our conclusions are consistent with other tourism impact research that found "if people feel like they have access to the planning/public review process and that their concerns are being considered, they will support tourism" (Cooke 1982; Lankford 1991; Lankford and Howard 1994; Rothman and others 1977). Consequently, extensive efforts should be made to identify ways to involve local residents in community planning and design efforts. Public decisionmaking is becoming increasingly important and necessary (Boothroyd and Davis 1993; Lankford 1994; Miller 1992) in planning, policy development, and sustainable development (Knowles-Lankford and Lankford 1994). Additionally, tourism (and other economic development practices) is often developed in ways in which people are adversely impacted, and yet they often have no say in corporate, national, or bureaucratic structures and decision-making relative to the development. This means that a space for participation must be found for a whole new set of actors (Friedman 1993) in the tourism planning and development process. Friedman (1993, p. 484) cautions: "Ordinary people do affect the spaces where they earn their livelihoods and where their daily lives unfold. The quality of that space is exceptionally important to them."

Policy formation in tourism requires some degree of consensus between all those involved with tourism development. A reasonable degree of consensus is needed for long-term success, and this can be achieved only where planners have a thorough knowledge of the views held by the host population (Ritchie 1988). Essentially, planners (and various government employees) have a responsibility to identify, evaluate, and present the decisionmaking bodies with the necessary information regarding the view of the resident population. In turn, decisionmaking bodies have the responsibility to address these views through policy and through plan adoption.

A long-term sustainable tourism industry in the Penghu National Scenic Area will be characterized by decisions that are made locally and that are cooperatively implemented (Lankford and others 1994). To develop an effective and cooperative citizen participation process, the issues, concerns, and discrepancies in preferences and attitudes toward tourism and recreation development need to be adequately identified on a continual basis and used in the planning and policymaking arena.

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Tourism is an industry of global significance. It is one of the World's largest industries and has become attractive as a relatively quick generator of foreign exchange for local areas. This volume contains 14 papers divided into three main topics: concepts of sustainability; understanding the market for sustainable tourism; and tourism and quality of life. Of increasing concern to the tourism industry and land managers is the integration of tourism into ecosystem management.

Keywords: ecosystem management, recreation, developing countries, travel industry



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